



SIERRA CLUB
FOUNDED 1892

TERRA FIRMA

MAY - AUGUST 2023

PUBLISHED BY VOLUNTEERS FROM THE LOWER HUDSON GROUP SIERRA CLUB

WELCOME TO SIERRA CLUB MEMBERS IN SOUTHERN ORANGE COUNTY!

By George Klein

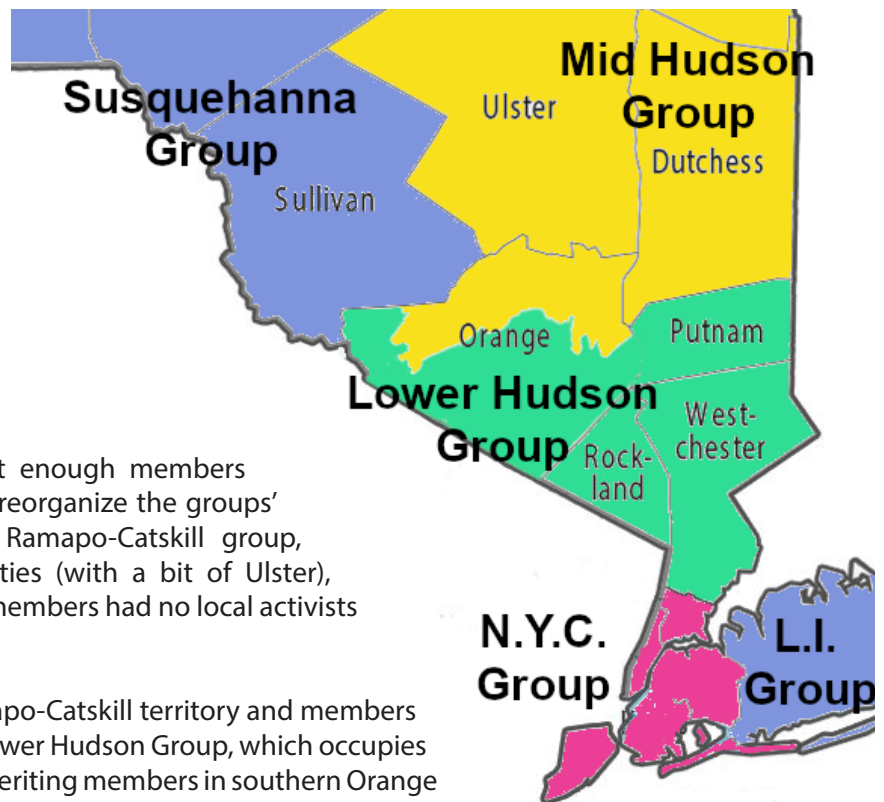
The Sierra Club chapter in New York State, the Atlantic Chapter, has 10 local groups, each occupying part of the state's territory. For example, the Long Island Group is comprised of all members in Long Island. The active members in each group volunteer to run the group, meaning they hold meetings, take part in an executive committee to consider all sorts of issues and make decisions, manage the group's finances, communicate with other members and the chapter (the state Sierra Club), etc.

When a group stops functioning because not enough members volunteer to run the group, the chapter has to reorganize the groups' territories. Beginning several years ago, the Ramapo-Catskill group, comprising mostly Orange and Sullivan Counties (with a bit of Ulster), became unable to run itself. This meant that its members had no local activists to turn to when questions and issues arose.

It took several years to reorganize, and the Ramapo-Catskill territory and members were reassigned to adjoining groups, with the Lower Hudson Group, which occupies Putnam, Westchester and Rockland Counties, inheriting members in southern Orange County. See the map for our new group territory and know that if you're receiving this newsletter, members in your zip code are now part of Lower Hudson Group.

Therefore, we extend a hearty welcome to members who live in southern Orange County, and ask you to contact the group executive committee with any questions or issues. See "Vital Numbers" in this issue of *Terra Firma* for contact info.

All members are encouraged to attend monthly Zoom meetings, of which there is one for the whole Lower Hudson Group, and another that focuses on Rockland and West of Hudson issues. Notice of these Zoom meetings is posted on the Lower Hudson Group website SierraLowerHudson.org and the Rockland website RocklandSierraClub.org. We also run hikes, which you can find on the Outings or Events tabs on the website. We hope to meet you soon!



Membership Meeting Schedule

Visit SierraLowerHudson.org and select Events

Visit RocklandSierraClub.org

All meetings via Zoom, link on websites

BREAKTHROUGH EPA PROPOSAL ON TOXIC PFAS CHEMICALS

By Peggy Kurtz

Thousands of communities across the country – including Rockland County and some communities in Westchester and Putnam – have detected toxic PFAS chemicals in their drinking water. PFAS (or per- and polyfluoroalkyl substances) is a large class of over 12,000 highly toxic chemicals. Widely used in thousands of the most common consumer products, PFAS chemicals are ubiquitous in the environment – and in fact, they are found in the blood of 99% of Americans.¹ PFAS are associated with serious health problems, such as thyroid disease, kidney and testicular cancer, reduced immune response, and developmental problems in unborn children. Because PFAS are nearly indestructible, they are also known as “forever chemicals”. As many as 200 million Americans may be exposed to these chemicals in their drinking water.²

In groundbreaking action on March 14, the U.S. Environmental Protection Agency (EPA) proposed federal regulations for the first time for six PFAS chemicals. EPA estimates that adoption of these regulations “will prevent thousands of deaths and reduce tens of thousands of serious PFAS-attributable illnesses.”³

This action by the EPA is a very big deal. The U.S. has not regulated a single new contaminant in drinking water in nearly 30 years.

EPA’s proposal follows the release in June 2022 by the agency of research showing that **some PFAS chemicals are toxic over lifetime exposures at even the lowest detectable levels.**⁴ The proposed regulations would set drinking water standards for two PFAS chemicals, PFOA and PFOS, at 4 parts per trillion (ppt), which is very close to the lowest practicable detectable levels, and combined standards for four more PFAS chemicals. Filtration and removal would be mandated when levels exceed these extremely low thresholds.

Currently, NYS standards for PFOA and PFOS (see Jan-April issue of *Terra Firma*) are at 10 ppt, which is *less protective* than the proposed federal regulations. Multiple PFAS

chemicals are found in nearly every single one of the public drinking water sources in Rockland County and in some wells in Putnam and Westchester. The proposed EPA standards would mandate filtration for many more of the public wells.

Ultimately, PFAS should be regulated as a class since it takes many years for even these few PFAS to be regulated and there are over 12,000 members of the PFAS family. However, this rule is a big first step. In another major win for public health, 3M, one of the largest manufacturers of PFAS, has now voluntarily committed to ending PFAS production and sale by the end of 2025.

Unsurprisingly, the chemical industry is fighting the proposed EPA regulations. Water utilities are also arguing that expenses are too great to filter water to these levels. While filtration is expensive to install and operate, these costs are still far less expensive than the enormous costs for healthcare from continued exposure to PFAS. The good news is that when granular activated carbon filters are installed to remove the regulated PFAS and properly maintained, they often also filter out other, non-regulated PFAS and other contaminants.

Turn Off the PFAS Spigot

Ultimately, the solution is to ban the continued production and sale of PFAS chemicals, which would dramatically reduce our ongoing exposure to these toxic chemicals. In fact, drinking water is the source of only 20% of our exposure to these chemicals. Therefore, all non-essential uses of PFAS should be eliminated. Several states have been leading the way. New York has already passed legislation to ban PFAS in fire-fighting foam, paper food packaging and apparel.

The list of common products that currently include PFAS is alarming, including most waterproof apparel, takeout food containers, sunscreen and makeup, dental floss, and even

...continued on next page

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 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 on the second Monday of each month. Check RocklandSierraClub.org for dates and locations. For more information: pkurtz9@gmail.com or call 845-709-0802.

PFAS CHEMICALS...continued from previous page

tampons and some toilet paper. The Environmental Working Group estimates that there “may be more than 40,000 industrial polluters of PFAS in the U.S.”⁵ With the EPA findings that these chemicals are toxic at the lowest detectable levels, the time has come to stop the production and sale of PFAS.

Assembly Member Ken Zebrowski, who represents large parts of Rockland County, has been working with a statewide coalition of environmental groups, including Sierra Club, on legislation that would ban large categories of products that contain PFAS. His bill, **A.3556**, includes a ban on PFAS in numerous consumer products, including paint, cleaning products, cookware, and textiles. Senator Brad Hoylman-Sigal has introduced the same bill in the Senate, **S.5648**. If you want to stop PFAS contamination, ask your Assembly Member and Senator to support this legislation as well as **S.3529/A.5990**, banning PFAS in menstrual products. Assembly Member Dana Levenberg, representing parts of Westchester and Putnam, has cosponsored these bills, as well.

Just as with lead, mercury, and asbestos, there is no known safe level of PFAS chemicals. By banning lead in gasoline and paint, we were able to dramatically reduce blood levels of lead. We can do the same with PFAS, but it will take action by both the federal and state governments.

WHAT YOU CAN DO:

1. Visit this link before the end of May to send a message to the EPA supporting its proposed limits to PFAS in drinking water: <https://act.sierraclub.org/actions/National?actionId=AR0385566>
2. Call your State Senators and Assembly Members to ask them to cosponsor the bills listed above.
3. Learn more about PFAS and safe alternatives to products that contain PFAS at <https://www.consumerreports.org/toxic-chemicals-substances/how-to-avoid-pfas-a8582109888/>
<https://www.ewg.org/areas-focus/toxic-chemicals/pfas-chemicals>
4. Get involved through Sierra Club. Contact rocklandclimate@gmail.com to help us in our ongoing work to stop this ongoing chemical pollution!

1 <https://www.ewg.org/areas-focus/toxic-chemicals/pfas-chemicals>

2 <https://www.ewg.org/tapwater/reviewed-pfcs.php>

3 <https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas>

4 <https://www.epa.gov/sdwa/drinking-water-health-advisories-pfoa-and-pfos>

5 <https://www.ewg.org/news-insights/news-release/2023/02/ground-breaking-map-shows-toxic-forever-chemicals-more-330>

HEMLOCK WOOLLY ADELGID

by Joseph Dunnigan

While hiking the Catskills or any of the number of preserves, parks, and reservations located in New York, you would be hard pressed to find a forest that seems to be lacking in abundance and diversity. Yet, that is exactly what is under attack as we speak.

A Threatened Ecosystem

The Eastern Hemlock (*Tsuga canadensis*) is a coniferous tree that is located throughout the Appalachian range in the Eastern United States. Coniferous trees, or evergreens, differ from deciduous trees in that conifers retain their foliage throughout the year whereas deciduous trees lose their leaves. Besides being a coniferous tree, Eastern Hemlocks are also a foundation species. As a foundation species, the Eastern Hemlock has direct effects on the biodiversity of its habitat. For instance, Eastern Hemlock canopies provide a cooler understory and allow certain species to thrive where they couldn't in a deciduous dominated forest. According to an article published by the United States Geological Survey, Brook Trout (*Salvelinus fontinalis*) were about three times more likely to be located in waters under a Hemlock Forest canopy than a Hardwood Forest canopy. Because of the unique characteristics that Eastern Hemlock stands provide for their ecosystems, it is vital that we protect them from harm. But there is a scourge which has blighted Eastern Hemlocks, and New York's Hemlock stands are not immune.

An Invasive Pest

New York's Eastern Hemlocks are infected by a tiny invasive pest which could alter the very composition of its forests. The name of this invasive species is the Hemlock Woolly Adelgid (*Adelges tsugae*). Hemlock Woolly Adelgids (HWA) originated from Japan. It is believed that the pests arrived in New York in the 1980s. Since then, they have wreaked havoc on forest ecosystems by damaging Eastern Hemlock stands.



Close up of Hemlock Woolly Adelgid in their woolly ovisacs
Photo courtesy of New York State Department of Environmental Conservation.

...continued on next page

HEMLOCK WOOLLY ADELGID...continued from previous page

HWA affects Eastern Hemlocks by literally sucking the life force from the tree. According to researchers at the University of Massachusetts, juvenile HWA imbed themselves on the branches of the Eastern Hemlock and insert a straw-like tubular object called a stylet into the tree. Then the HWA feeds on a substance called phloem, which depletes the Eastern Hemlock's ability to effectively utilize photosynthesis. The researchers also found that the HWA may transfer its toxic saliva, which may be the cause for needle loss in Eastern Hemlocks. The loss of needles means a thinner canopy, which could result in the forest floor becoming warmer, and which may alter the species composition of forest understories. But not all is lost.



Hemlock Woolly Adelgid with Measurement for Reference

Photo courtesy of New York State Department of Environmental Conservation.

Combating the Hemlock Woolly Adelgid

Currently, there are control measures being put in place by agencies such as the New York Department of Conservation. The DEC utilizes two types of control measures in combating the HWA: biological and chemical controls. Biological controls were started in the 1990's with the use of *Sasajiscymnus tsugae*, a black lady beetle. In the 2000's, the DEC switched to using another type of beetle, *Laricobius nigrinus*, finding more success with their introduction. More recent is the use of silver flies (*Leucopis argenticollis* and *Leucopis piniperda*) which the DEC is still monitoring for effectiveness. In addition to these biological controls, the DEC utilizes chemical agents. The chemical insecticides in use by the DEC for controlling HWA are Imidacloprid and Dinotefuran. These agents are applied to individual trees, in which Dinotefuran is a fast-acting agent and Imidacloprid is a longer-lasting control. The chemicals work together to protect the tree for about seven years. But to prevent further spread of the HWA, the Department of Conservation needs your help.



Laricobius nigrinus feeding on HWA
US Forest Service, Bugwood.org

Photo courtesy of New York State Department of Environmental Conservation.

What You Can Do

To help control the spread of HWA, be sure to clean your gear after hiking. It's also important to stay vigilant when you're in nature and learn how to identify HWA that could be on the branches of nearby Eastern Hemlocks you may pass by on the trail, in the park, or maybe your backyard. If you think you have come across an infected site or tree, the DEC asks that you take a photograph with something to scale the specimen, such as a coin, then email the pictures to foresthealth@dec.ny.gov, or call **1-866-640-0652**. By reporting infected Eastern Hemlocks, you are ensuring the continuation of the abundance and biodiversity of New York's forests.

The author is a professional firefighter, graduate student in forests and climate change, and new member of Sierra Club Lower Hudson Group.

HIKES AND OTHER OUTINGS

Don't forget to check the Outings page on our group website for all kinds of outings. They're fun and invigorating, and a great way to meet like-minded people of all ages and walks of life.



Visit SierraLowerHudson.org and click Outings.

ELEVEN ESSENTIALS FOR AN ENJOYABLE HIKE

by Henri de la Vega

Whether you are hitting the trails for a short day hike or a long trek, carrying the eleven essentials is a great way to prepare yourself for an enjoyable trip in the backcountry.

1. A layering system

Dressing in layers allows you to remove or add clothes to adjust your temperature. Always carry rain gear and be sure to pack a warm layer even in the summer.

2. Sun protection

Items like sunscreen, a wide brimmed hat, sunglasses, SPF lip balm and UPF clothing will help protect you from the sun's radiation.

3. Navigation

A map and compass are invaluable tools. Familiarize yourself with your route before heading off on your trip. Phone apps are great for determining how far along your route you are but shouldn't be used as a primary source of navigation.

4. Headlamp

Make sure you are prepared to be out after dark by carrying a light source. Headlamps are a great option; they cast light at eye level making it easy to find trail blazes and leave your hands free.

5. Food

Carry snacks and meals that will sustain you throughout your hike. Cold weather and steep, uneven terrain will require you to take in many more calories.

6. Water

Carry ample water and keep a small water filter in your pack so that you may refill from a water source. If you are planning a long hike check if there will be water sources along your route and start hydrating several days before your trip.

7. First Aid

Pre-packaged first aid kits are a great addition to your kit. Most of them come with everything you need, and prepackaged kits are often less expensive than assembling your own from scratch. Make sure you are familiar with the contents of your first aid kit and consider taking a Wilderness First Aid course.

8. Fire source

A fire can be a great way to stay warm in an emergency. Be aware that many parks do not allow fires and that you may be held responsible for any damage that is created by one. Never leave a fire unattended and make sure a fire is fully extinguished before departing.

9. Knife

A knife is a handy tool with a multitude of uses. A small knife can be used to cut first aid materials, shave wood for starting a fire or to cut up your cheese.

10. Shelter

An emergency bivvy or a large mylar blanket can be a life saver in an emergency. It can keep you dry and warm if you find yourself needing to spend an unplanned night in the backcountry.

11. Bathroom kit

To responsibly answer the call of nature, pack a lightweight trowel, TP and hand sanitizer. If it's not urine, poop or single ply toilet paper it should be packed out. Bury waste in a hole that is 6-8 inches deep and 3-4 inches wide and make sure you are at least 200 feet away from the nearby water.

Henri de la Vega is a NYS Licensed Outdoor Guide, co-founder of West Mountain Guide Co. and deputy program director of Another Summit.

Anyone who is interested in getting certified to lead Sierra Club hikes, please reach out to Gail Dutan at gail@move2lifeny.com.

Community members are also welcome to join hikes given by Another Summit, the Sierra Club Military Outdoors partner in our area. Another Summit Outings Leaders are trained by the Sierra Club and work primarily with veterans and first responders, but they welcome all community members to join them.

See the current list of hikes at SierraLowerHudson.org, click on the Outings tab.

ACCURATE ACCOUNTING NOT JUST FOR TAX RETURNS

by Gale Pisha

Income tax returns are due in April, and so is the New York State budget. This year's budget negotiations brought an unexpected crisis which pulled the environmental community together in a way not seen since the fracking fight in 2013. What happened?

Governor Hochul is concerned about the costs to consumers of implementing New York's nation-leading law, the Climate Leadership and Community Protection Act (CLCPA), which calls for a transition away from fossil fuels to a clean, renewable energy economy. Her proposal was to include in the budget the language from a bill, S.6030/A.6039, which would change the way NYS accounts for methane emissions. This would slow the transition and allegedly save money, a position strongly supported by the fossil fuel industry as a way to continue operating longer.

The environmental communities mobilized within a day, urging their members to contact the governor, their legislators, and the legislative leadership to stop the change to the CLCPA, a law that was carefully drafted over more than three years with public input. The Scoping Plan released in December, 2022, by the Climate Action Council laid out a timeline for a just transition after thousands of hours of public comment and professional analysis, and activists opposed the attempt to change such an important part of the law during budget negotiations which are not transparent to the public. Environmental justice organizations also opposed this change after having fought for decades for the emissions goals in CLCPA.

Senator Pete Harckham and Assembly Member Deborah Glick, each chair of the Environmental Conservation Committee in their respective houses, stood firm against this change to gut the CLCPA. Harckham appeared on the Brian Lehrer Show of WNYC to explain the situation and said that though affordability is a valid concern, there are ways to address it without gutting NY's climate law. Others pointed to the billions of dollars a year that New York spends to support the fossil fuel industry which could be saved by the transition to renewable energy, and they rejected the industry's specious claim that NY would lose out on federal money from the Inflation Reduction Act because NY counts the effects of methane more stringently.

In the end, the power of the people triumphed over the money of the fossil fuel industry lobbyists. After a week of public outcry, the governor's proposal was withdrawn from budget negotiations, though the bill is still active so the environmental community needs to stay vigilant.

Why is the accounting method important?

Why were environmentalists so concerned about a wonky, technical change in accounting for greenhouse gases? The answer is that methane is about 80 times more potent at warming the planet in the first 20 years than carbon dioxide. After 100 years, methane's potency as a greenhouse gas is still prevalent at about 25-28 times that of carbon dioxide, but its most important impact on climate change is in its first 20 years.

Carbon dioxide, with a global warming potential (GWP) of 1, is the reference for expressing the heat absorbed by any greenhouse gas in the atmosphere. Other greenhouse gases, such as nitrous oxide and hydrofluorocarbons, have GWPs of hundreds to thousands of times that of carbon dioxide. The GWP of a greenhouse gas depends on the time horizon over which it is calculated, since gases are removed from the atmosphere at different rates.

Carbon dioxide itself causes heating that will last thousands of years, so the fact that methane eventually breaks down into carbon dioxide means it will still have a warming effect on the planet. A Sierra Club member who is an engineer calculated that at the rate we are adding carbon dioxide to the atmosphere, it will take approximately 2,000 years to naturally undo 1 year of our current fossil fuel use. To get back to the 275 parts per million concentration of carbon dioxide before the industrial revolution would take on the order of 170,000 years, assuming we stopped burning all fossil fuel today.

Back in the 1990s, the Intergovernmental Panel on Climate Change (IPCC) gave GWP estimates based on timescales of 20, 100 and 500 years, and governments have been using the 100 year timescale (GWP100) for methane since then. However, as Dr. Robert Howarth of Cornell University explained in a letter of March 31, 2023, to the governor and legislative leaders, "in the early 1990s, the role of methane was under-appreciated by both scientists and policy makers, and negotiators [of the Kyoto Protocol] chose the middle value from the early IPCC reports (ie, GWP100) with little or no discussion." Since then, it has become much clearer how damaging methane emissions are, and the IPCC has recently called for much more urgent action to reduce greenhouse gas emissions.

The CLCPA uses a GWP20 for calculating the amount of emissions reductions that need to be achieved to meet its target of net zero emissions by 2050, which will require the transition away from methane-producing fuels more quickly than under a GWP100 accounting method. New

...continued on next page

ACCURATE ACCOUNTING NOT JUST FOR TAX RETURNS...*continued from previous page*

York is weighing more accurately the detrimental effects of methane released over the next 20 years, since the science has shown that methane emissions are bringing the planet closer to catastrophic tipping points beyond which the climate system will become self-perpetuating and lead to irreversible impacts for all life. We don't have 100 years to solve the climate crisis.

By using a GWP 20 to require drastic methane reductions, we are buying the planet and ourselves several decades to figure out strategies to remove other greenhouse gases,

including carbon dioxide, from the atmosphere. Maryland also uses GWP20, and the hope is that other states and countries will switch to this more stringent method of accounting, as well.

So that's why environmentalists mobilized so quickly in early April to oppose changing the way NY accounts for greenhouse gases when planning how to meet its climate goals. It turns out that accurate accounting is important for more than just tax returns.

VITAL NUMBERS LOWER HUDSON GROUP SIERRA CLUB **Local Sierra Club website: SierraLowerHudson.org** **Rockland Sierra Club website: RocklandSierraClub.org**

Edward Berry*

Political Chair
berryed3@gmail.com
Tel. (914) 393-6196

Linda Brunner*

Conservation Committee Co-chair
Publicity Chair
loki.lamb@gmail.com
Tel. (914) 476-5898

Laura Burkhardt

Secretary
Election Coordinator
lfburkhardt@optimum.net
Tel (845) 290-0874

Marilyn Elie*

Energy Co-chair
Chapter Delegate
eliewestcan@gmail.com
Tel. (914) 954-6739

Gail Dutan*

Outings Leader Training Coordinator
Newsletter Design
gail@move2lifeny.com
Tel. (845) 742-4544

Jo Anne Gorski

Wildlife Chair
jojogorski@aol.com
Tel. (914) 299-6006

George Klein

Airport issues, Volunteer Coordinator
Newsletter Co-Editor
lowerhudson@gmail.com
Tel. (914) 772-3916

Peggy Kurtz*

Rockland County Leader
pkurtz9@gmail.com
Tel (845) 709-0802

Susan Leifer

Indian Point, Airport issues
esmesu@gmail.com
Tel. (914) 769-6656

Aaron Leonard

Outings Chair
aaron.leonard@sierraclub.org

Silvia Luzi

Membership Database Manager
silvialuzi@hotmail.com
Tel (845) 358-4254

Bill Meyer*

Group Chair, Energy Co-chair
WTMiii@hotmail.com
Tel. (917) 806-5839

Erin Heaton Meyer

Facebook Manager
ernieny@gmail.com
Tel. (914) 582-0481

Patricia Peckham

Advertising Coordinator
pattypeckham13@gmail.com
Tel. (914) 645-9889

Gale Pisha

Assistant Treasurer
At-Large Chapter Delegate
Newsletter Co-Editor
soygale@verizon.net

Liam Robb O'Hagan*

Alternate Chapter Delegate
Co-Webmaster
Social Media Specialist
liam@extremeyou.com
310.435.1943

Jeff Schumann

LTE Coordinator
Renewable Siting Committee
jefflynn.dinobirds@gmail.com

Martha Upton*

Conservation Co-chair
Renewable Siting Committee
marthaupton76@gmail.com

Sarah Wilson*

Group Vice-Chair
Renewable Siting Committee
Treasurer
sadw@optonline.net
Tel. (914) 962-7279

*Executive Committee member



TERRA FIRMA

c/o GAIL DUTAN
16 Garrison Road
Carmel, NY 10512

NONPROFIT
ORGANIZATION
US POSTAGE
PAID
WHITE PLAINS, NY
PERMIT NO. 4304

LOWER HUDSON GROUP

SIERRA CLUB

WESTCHESTER, PUTNAM, ROCKLAND & SOUTHERN ORANGE COUNTIES

*"If you think you are too small to make a difference,
you haven't spent the night with a mosquito."
African Proverb.*



**SIERRA
CLUB**
FOUNDED 1892

TERRA FIRMA

MAY - AUGUST 2023

PUBLISHED BY VOLUNTEERS FROM THE LOWER HUDSON GROUP SIERRA CLUB

Inside

.....

Welcome To Sierra Club Members In Southern Orange County!..... 1

Breakthrough EPA Proposal On Toxic PFAS Chemicals..... 2-3

Hemlock Woolly Adelgid 3-4

Hiking Essentials For An Enjoyable Hike..... 5

Accurate Accounting Not Just For Tax Returns 6-7

Vital Numbers..... 7