



# The Quinnehtukqut Connecticut Chapter

The Monthly Newsletter for Events, Information, and Action



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## REQUEST FOR CONTENT

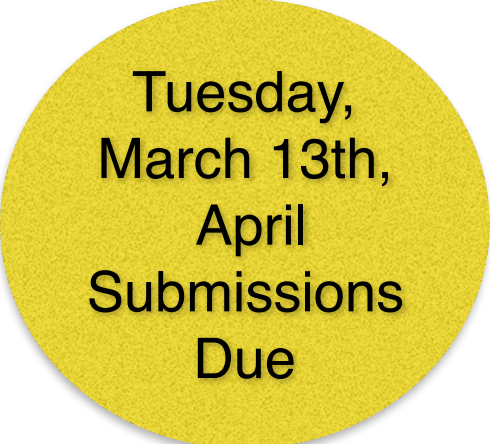
All Connecticut Sierra Club members are invited to contribute to the *Quinnehtukqut*. We accept articles, book reviews, puzzles, events, photos, poems, etc. Articles, limited to 500 words, should be on a subject of local or national interest to the Connecticut Chapter membership. The goal of the newsletter is to inform, educate, motivate and involve our members.

To submit newsletter articles, letters to the editor, etc. for the *Quinnehtukqut*, send to [ctsierraq3@gmail.com](mailto:ctsierraq3@gmail.com). To post information to the website or social media, send content to [connecticut.chapter@sierraclub.org](mailto:connecticut.chapter@sierraclub.org).

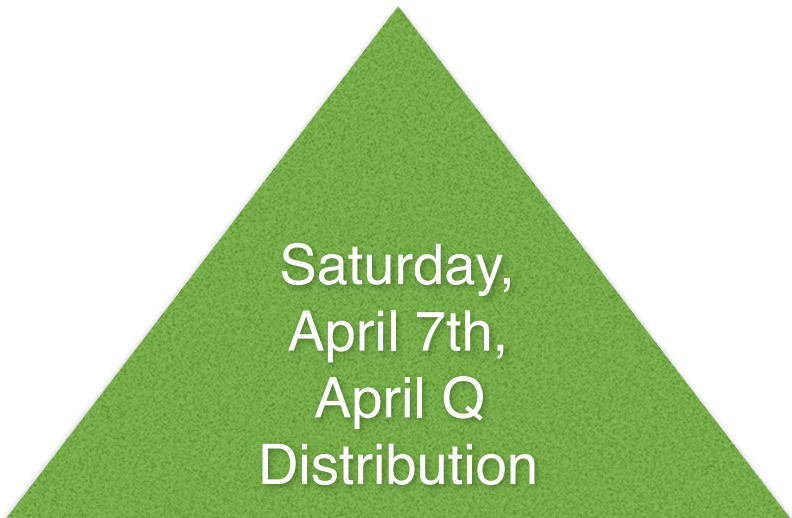
Here is the newsletter calendar for the next two 2018 submission dates. Please read dates carefully. The calendar is intended to make it easier for you to plan your *Quinnehtukqut* contributions for publication.

The *Quinnehtukqut* is distributed at the beginning of the month.

### MARCH CALENDAR




Tuesday,  
March 13th,  
April  
Submissions  
Due



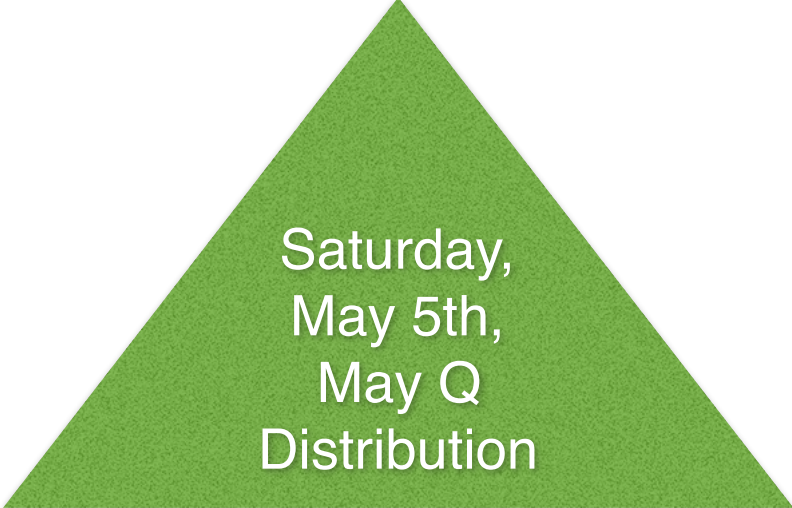
Saturday,  
April 7th,  
April Q  
Distribution

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### APRIL CALENDAR



Friday,  
April 13th  
May  
Submissions  
Due



Saturday,  
May 5th,  
May Q  
Distribution

*All decisions regarding use are made by the Communications Committee.*

## MARCH 2018 CHAPTER CHAIR UPDATE

by Martha Klein

Although most, if not all of us, experience sadness and dread because of the daily depredations of an unhinged president, nevertheless this is a great moment to be an environmental activist. We are the Bionic Women, Black Panthers and Supermen of our era; we stand up for the health of the planet and our cause has never been more urgent or held promise for so much change.

The American majority worry about climate disruption, including half of the Republicans. An unhinged leader taking away people's clean air, clean water, homes and rights is more than the American people can tolerate. The great news is...It's an election year! And 2020 is not so very far away. Stay hopeful.

Gas Pipelines



or

Clean Energy



### February's Environmental News

To our benefit, there was a lot of environmental news last month. Sierra Club with ally CFE (Connecticut Fund for the Environment) joined Connecticut Attorney General George Jepsen in a **federal suit against the EPA** demanding that a coal plant in Pennsylvania, that contributes significant pollution to our air, be cleaned up. We won the suit and the EPA will be required to hold a public hearing on the request to devise a plan that addresses the pollution from the Brunner Island Steam Electric Station, a 56 year old coal plant.

The **release of the final CES** or Comprehensive Energy Strategy finally happened. On the positive side, the new CES outlines eight strategic areas where the state can make changes to increase fuel diversity, close the energy affordability gap and reduce greenhouse gas emissions. Negatively, the CES fails to describe a pathway to achieve its stated goals, and in fact, appears to put road blocks in the way of increased renewable energy use. The CES limits access to rooftop solar for a majority of Connecticut residents, has limits on solar net metering and continues to push the failed ratepayer funded gas conversion plan and massive gas pipeline expansions.

The **investigation of Eversource and UI for alleged gas market manipulation continues**. At a February hearing, the companies denied making a profit from the increased prices for fracked gas when they created the false appearance of scarcity. The PURA investigators neglected to ask if those profits went to the electric side of their business. Profit denial was followed by the constant complaint by both companies that the pipelines are at capacity (they aren't) and enlarged gas pipelines must be built.

Here's the super scary part: **three interstate gas pipeline construction projects have already been completed**—two on the Algonquin line (Algonquin Incremental Market and Atlantic Bridge) and the Kinder Morgan CT Expansion. Massive increases in the amount of fracked gas entering and transiting across our state are occurring; yet according to Eversource and UI, it's as if those expansions never took place. They claim all the gas pipelines are operating at capacity.

Eversource is an owner of interstate pipeline and seeks more expanded fracked gas pipelines built with ratepayer subsidies. Note: There are no equivalent subsidies for solar or wind power projects. Although the cost to install solar in Connecticut has fallen 55 percent since 2013, **Connecticut is still limiting access to solar and forcing ratepayers to invest in climate destroying natural gas.** The competition between natural gas and renewable energy is fueled by public subsidies to natural gas instead of the other way which would bring more clean energy to our state.

*Martha Klein is Chair, CT Chapter Sierra Club*

## FEBRUARY CHAPTER ACTIVITIES

### Our Chapter's Busy February Activities

February was a very busy month at the CT Chapter Sierra Club. A major activity we hosted was a protest of the Trump administration's offshore oil and gas drilling plan, which is enjoying bipartisan opposition in nearly every state where it is proposed. The February 13th rally, co-hosted with our allies at Surfrider, CT League of Conservation Voters and 350 CT, was a big success and we received good press coverage. Visit our website to view coverage: [Sierra Club Press Release](#)

#### BOEM Rally

The **Bureau of Ocean Energy Management (BOEM)**, which is under the Department of the Interior, held a meeting in Hartford. Our February 13th rally was held before entering the informal meeting, and staff from Senators Blumenthal and Murphy's office were present. Both Senators oppose the drilling plan along with all our federal members of Congress plus Governor Malloy and Commissioner Klee. Unfortunately, the meeting itself was very much like the advertising we're used to from the gas pipeline company's pitches. There was no public comment, so citizens couldn't hear from each other; we could only hear the sales pitch from BOEM.



#### Submit Testimony to BOEM

You can submit public testimony. Visit: [Submit Here](#).

**The deadline to submit testimony is March 9, 2018.** Please submit comments on BOEM's Draft Proposed 2019-2024 OCS Oil and Gas Leasing Program [Here](#).

## Teach-In for Climate Justice Now, Go Green, Clean Energy Forum

We hosted the well attended *Teach-In for Climate Justice Now* on February 24th, along with ally 350 CT and numerous other sponsors. A stellar roster of social justice and environmental leaders spoke, including Jacqueline Patterson, NAACP Director of the National Environment and Climate Justice Program. In the spirit of "**No More Walls**," environmentalists and social justice, immigrants' rights and labor activists joined to explore, educate and get educated about impacts from climate change on environmental justice communities, and the need to build a more just, equitable, unified and powerful movement.

On February 27th, we helped the UCONN PIRG students lead a **Go Green** rally for an improved CES at the state capitol. We are thrilled at the chance to work with millennial activists, who have so much at stake and have lived their whole lives under the specter of climate disruption and global heating. They inspire us.

On the evening of February 27th, we attended a **Clean Energy Forum** in Branford, hosted by Citizens Campaign for the Environment and CFE, and participated in a discussion with residents and legislators.

## Legislative Activity

Bills have been introduced which your Connecticut Chapter Sierra Club supports: **Senate Bill Numbers 7 and 9**. These were introduced by Governor Malloy in response to the final CES release. SB 9, "An Act Concerning Connecticut's Energy Future" would increase the

Renewable Portfolio Standard to 40 percent by 2030, which is recommended in the CES. SB 7 is called "An Act Concerning Climate Change Planning and Resiliency" and deals with greenhouse gas reduction targets. Stay tuned for information on how to notify your state senators and representatives about the bills we support. Please attend the March 14th Lobby Day. We make the difference!



We support Senate Bill (SB) 103, "**An Act Concerning Hydraulic Fracturing Waste in Connecticut**." Let's prevent the road sign nobody wants to see in Connecticut.

## TAKE ACTION NOW

### Vote: 2018 Sierra Club National Board Election

According to the bylaws of the Sierra Club, eligible Club members elect the National Board of Directors on an annual basis. Your membership means your action is to Vote. Your ballot, paper or electronic, will be sent to you in early March. It will include information on the candidates and where you can retrieve additional data on the website.

Even if you don't know the candidates, which is likely, you can read a statement about each one. Visit the Club's election website for additional information about candidates.

Go to: [Board Elections](#).

As internet voting saves time and postage, we suggest you use that option.

Ballots are due April 25, 2018.



## MARCH EVENT

### Clean Energy Lobby Day

**March 14th, 10:00am**

**Legislative Office Building, 300 Capitol Avenue, Hartford**

Join CT Chapter citizen lobbyists at this event coordinated by Clean Water Action. This important advocacy session will urge legislators to support a strong Renewable Portfolio Standard, protect net metering and restore the \$175M in Clean Energy Funds that were raided last year to supplement the General Fund. Watch for details on [www.cleanwater.org](http://www.cleanwater.org).

## CONNECTICUT'S ENVIRONMENTAL HEALTH

### Keep Our Water Supply Public

by Ann Gadwah

Right now, two-thirds of the towns and cities in Connecticut obtain their water from a privately-owned company. Similarly, many other Connecticut towns are considering the sale of their water to the highest bidder.

Financially struggling municipalities see privatizing their public water supply as an answer to their budget problems and aging water systems. Unfortunately, drought or excessive precipitation are climate change problems that loom on the horizon and threaten to make water an even more limited resource.



Some refer to water as the “new oil” when private companies step up their campaigns to turn water into a commodity. The offers to purchase and run the water supply for our towns and cities foretell the future of failing water supplies and a market to exploit.

#### **Benefits vs Risk**

The risks far outweigh the benefits of selling our water. Privatizing water supplies often backfires on towns. By abdicating control over their water supply, the public loses both input and accountability.

Private water companies have a

responsibility to their shareholders, not to the general public. If water is privatized, the public no longer has a say in the management and distribution of their water systems. And the ultimate insult and red flag is private companies can restrict public access to information in these matters.

There is also no guarantee that water costs will go down or that service will improve with privatization. It has been shown that rates generally go up when the water is owned and operated by a privately-owned utility company. *Food and Water Watch* found that rates are

typically 59% higher for water service and 63% higher for sewer service. Lack of competition, the expense of implementing private contracts and concerns over shareholder profits often contribute to these higher costs. Also, there is ample evidence that maintenance backlogs, wasted water, sewage spills and worse service often follow privatization.

### **New Hartford's Dilemma**

One Connecticut town facing the question of whether to privatize their water and sewer utilities is New Hartford. Water and sewer privatization has been offered as a solution to the town's financial problems with their wastewater treatment plant. The town holds significant debt from the construction of the plant which runs at a deficit. In addition, the 10 percent of the town's population that uses the service, pays the second highest rates in the state. These problems make it very tempting for the town to sell the water and sewer assets to alleviate their burden.

Looking past the obvious practical concerns mentioned above, we also must consider that access to water is a human right. Instead of privatizing water supplies, we should be looking at ways to ensure clean, affordable water is available to all citizens regardless of income or location. The way to do this is to keep water supplies as a public trust, where we can guarantee that our water supplies are used for the good of the public, not for the good of the shareholder's wallets.

The fight over who owns and controls the water will only heat up in the future. What we do now will determine what kind of say our citizens will have in this fight. Keeping our water systems in the hands of the public is the best way to make sure our interests are served.

Resources: [Food and Water Watch](#)

[Town of New Hartford Water Pollution Control](#)

*Ann Gadwah is Political Chair and a member of the Executive Committee of the CT Chapter Sierra Club*

## **MEMBER ACTIVISTS**

### **Martha Klein: 2018 TownVibe Green Award Winner**

TownVibe, a publisher of lifestyle magazines and digital products, announced the winners and honorable mentions of the 2018 Green Awards. The Green Awards recognize businesses, non-profits, and individuals who are leading the local fight to protect the environment while also creating a sustainable social and economic community.



The Connecticut Chapter Sierra Club is proud to announce that the winner in Category 3, "Individual(s) who are actively promoting and living a green lifestyle" went to Martha Klein, our Chapter Chair.



#### **Martha Klein, The Sierra Club**

Martha Klein is consistently trying to mitigate climate change and in her position as Chair of the Sierra Club in Connecticut, she advocates for renewable energy by writing legislative briefs, facilitating informational sessions and organizing public testimony on all things environmental in Connecticut.

The Green Awards winners will be honored at a reception and ceremony, March 22, 6:00pm, at Hotel Zero Degrees, Danbury. The ceremony is open to the public. Tickets can be purchased for \$50 [Here](#).

The other Vibe winners are:

**Category 1.** Businesses or non-profit organizations whose primary focus is producing or selling innovative green products, providing innovative green services, and/or promoting a green lifestyle.

**Washington Environmental Council, [wec-ct.org](http://wec-ct.org)** WEC began in 1972 and has led environmental efforts in Washington, CT, in such efforts as creating the town's first recycling program, being the first town to ban the storage and disposal of fracking waste and awarding student scholarships. And last year it organized an Earth Day 5K, partnering with The Steep Rock Association and Future Now Environmental Expo.

**Wilton Go Green [wiltongogreen.org](http://wiltongogreen.org)** Wilton Go Green is making a big difference in a small town. It has become the hub of Wilton green activities and has developed several programs that have gone on to inspire other towns to create similar programs, most notably the Wilton No-Idling Program and Wilton Zero Waste Schools initiatives. Other activities include the CT GreenLEAF school program, Green Speaker Series, Annual Wilton Go Green Festival, Green Business Designation Program, Solarize Wilton and Home Energy Solutions programs.

**Category 2.** Businesses or non-profits, not a producer or seller of green products or services, that have significantly incorporated green practices into their culture and operations.

**Murphy Brothers Contracting [murphybrothers.com](http://murphybrothers.com)** Murphy Brothers Contracting was a huge early-adopter of solar-shingle installation. Today they use SunTegra Solar Shingles, which it says produce thirty percent more solar-produced energy per square inch at thirty percent less cost than other products. Murphy believes that building green is simply building smart.

**Asarasi, Inc. [asarasi.com](http://asarasi.com)** Asarasi's sustainable and renewable water is harmlessly sourced from living wells, trees and is the only 100 percent pure water USDA certified organic. A byproduct of the maple industry, Asarasi is a renewable source of fresh water that is harmlessly harvested from trees!

#### **Honorable Mentions**

Curbside Composting

Patrice Gillespie

Heather Priest, Middlebrook School

i2 Lighting Systems

The Wooster School

Sand Road Animal Hospital

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# TRANSPORTATION

## Special Transportation Fund (STF): A Primer

by James Root

For Connecticut environmentalists/ecologists especially, transportation, private or 'mass,' is always a central issue. Close to half the state's greenhouse emissions come from our transportation sector (with power generation and heating splitting the remainder). At the center of the transportation debate, it seems, is something called the Special Transportation Fund (or STF). What is this staid acronym that gets so much news print and seems to require your full understanding to grasp our state's transportation policy?

State residents concerned about the future of Connecticut's transportation policy are aided in having a basic grasp of the dry but critical concept of the STF. Here goes:

Some cursory research suggests that the STF was set up in 1984 as a response to the Connecticut Department of Transportation (DOT's) somewhat fiscally autonomous role as a collector of a lot of state gasoline tax money (big bucks) and fares and fees from trains, buses and the Department of Motor Vehicles (DMV) respectively.

### **Federal Assistance and Credit Ratings**

The STF is necessarily augmented by federal money, given and loaned, from the Federal Transit Authority (buses and trains), the National Highway Safety Authority (big roads) and sometimes through the National Highway Trust Fund. The latter is the destination of the federal tax on your gasoline purchases (about half the state tax amount on your receipt).

Importantly, the STF is also used as collateral for bonds/loans that are needed for big projects like road and rail construction and, to an equal extent, mere general upkeep. Interest on said bonds, like those put out by the state generally, is a considerable part of the DOT budget and can increase if STF levels fall low enough to hurt credit ratings (which would then raise interest rates).

Relative to other state agencies, the DOT and the STF seem to function interdependently. Thus, the particular importance of transportation in our busy, crowded state, means a lot of attention is paid to the STF level because the STF level determines the budgetary viability of many DOT operations including mass transit projects that environmentally-oriented Connecticut residents like us hope to see materialize.

### **The Governor's Proposals Affected by STF**

Unfortunately, some of Governor Malloy's more exciting, proposed transportation projects and improvements are in jeopardy because of falling STF revenues. These falling revenues have been caused largely, and somewhat ironically, by decreased gas tax receipts. The culprit: more efficient cars, the main spur behind the proposal to bring back highway tolls. If implemented, the tolls would be an obvious and designated, revenue bonanza for the DOT/STF.

STF shortfalls are not helped by the Connecticut government's habit of raiding the fund to fill holes in the general budget. Such a raid last year, in the neighborhood of \$130 million, directly resulted in CT MetroNorth train fares being increased (again).

The state's Democrats and Republicans have taken turns in championing legislation prohibiting such raids by creating a bureaucratic 'lockbox' out of the STF. Look for more discussion on the lockbox because there will be a referendum on the lockbox proposal on the election ballot in November.

*James Root is a Danbury resident and a CT Chapter Sierra Club member.*

## Take Action for Clean Transportation

by Mark Kresowik

The Governor's Council on Climate Change (GC3) is taking public comments on what Connecticut needs to do to hit our climate protection targets in the transportation sector. The Council's own data shows that we need to power nearly all of our vehicles with clean electricity rather than dirty oil, expand public transportation opportunities, and make our communities more accessible to walking and biking. We can help fund those actions by charging dirty oil companies for their pollution, saving billions of dollars, creating tens of thousands of new jobs and fostering a more just and equitable transportation sector.

In this challenging fiscal environment for our state, we need to raise new funds from polluters and make sure that every public dollar we spend is helping move to a clean transportation future.

**[Take action today by telling Governor Malloy and his GC3 officials to put Connecticut on the path toward 100% clean energy for our transportation sector now!](#)**

*Mark Kresowik is Eastern Region Deputy Director, Sierra Club Beyond Coal Campaign*

## The Road Narrows

### The Need for Green, Future-Focused Transportation in Connecticut

by Colin Cogle

The dry well of transportation laid out in the previous article by James Root has also affected our public rail systems. Transportation advocate and columnist Jim Cameron notes that our rail cars are aging almost as fast as our rail bridges, and peak-hour trains on the New Haven Line are so full that there's standing-room only, which doesn't help the Metro-North's ticket collection rates. The only positive blip on our radar is that construction is continuing on the New Haven-Springfield line, thanks to its federal-funding.

### Bus System Runs in Circles

Our bus systems are running in circles. A quick count of the DOT's website shows 17 public or state-owned bus lines, each one doing its own little thing in its neighborhood. While our first foray into bus rapid transit [CTfastrak.com](http://CTfastrak.com), links Waterbury and Bristol to New Britain and Hartford, the day a car-free person can travel from Danbury to Danielson is not today. Tomorrow doesn't look good, either.



To sum it up, our buses rarely take us out of one county. Trains are overcrowded, overpriced and understaffed. A lot of our state is suburban or rural, which reserves biking as a form of transportation for only the dedicated cyclist; and walking saved for those who have access to sidewalks, determination or both. That's driving more people to driving, which only adds more cars, traffic and exhaust fumes to our aging roads and deficient bridges.

Needless to say, the situation in Connecticut is a feedback loop. On one hand, various politicians and pundits have proposed such revenue-boosting emetics as tolls, mileage taxes and more fare increases. On the other hand, there have been floated equally nauseous cost-

cutting measures like ending off-peak service on the three Metro-North branches, reducing Shore Line East's weekend service, cancelling our order for much-needed train cars, closing bus lines and hoping our old roads and structurally-deficient bridges can last just a little bit longer. It's enough to make a worker invest in a good webcam and Skype his or her way to the office for the next thirty years.

### **Stop Pollution, Eliminate Dirty Cars**

While we're lamenting these budget problems that seemingly came out of nowhere and looking for a silver bullet, this call for a radical change is also our state's chance to lay out a bold vision to reduce our reliance on dirty cars. Don't get me wrong-cars are wonderful-but in the long run, all they do is pollute, add to traffic jams, and wear down our crumbling infrastructure.

Depending on the time of day, most vehicles have only the driver inside. Aside from offering a tempting carpool lane, we need to continue our investments in clean transportation and public transportation.

### **East/West Rail Proposal and Beyond**

There are many ways to travel north to south in our state: Route 7, Route 8, Route 9, Route 12, I-91 and all three Metro-North branches. Aside from I-95, the New Haven Line, and Shore Line East jockeying our southerly coast, our state's only other east-west transit links are I-84, I-384 and Route 6. Investment in a train line that links towns such as Danbury, Southbury, Waterbury, Meriden, Hartford, Manchester, Willimantic and Norwich would provide east-west travelers an alternative to clogging up I-84 and the nearby gas pumps.

But why stop at our borders? In Europe, each country's rail system is connected to their neighbors'. You can travel through the entire E.U. in a single trip with a single ticket. National high-speed rail is a pipe dream for the foreseeable future, but why can't we build it regionally? Trains from Albany to Hartford would draw tourists and their wallets into sleepy towns like Sharon and Salisbury. Rail from New Haven or Hartford that linked to the MBTA would draw Bostonians to visit the Quiet Corner, or even move there to escape the high rents of the city. A regional project like this is not unheard of; the New England Interstates of almost a century ago predate the Interstate Highway System and even beat the U.S. Routes to the map.



Let's not forget buses. Expanding CTfastrak would only help. Combining our disjointed regional bus systems into one, or at least offering interchanges between them, would also make them a more attractive option to reduce traffic and fuel consumption. The MTA's Web site and mobile apps allow riders to quickly check schedules and buy tickets. Why not add the same convenience to our bus systems?

Though we're facing hard times ahead, we're also facing harder questions about the future of our state, and what we'd like to become. Transportation projects take

years to plan, years to build, and last for decades. They also create jobs for laborers, construction firms, architects, engineers, etc. Connecticut must spend what little money it has wisely, and that means building effective people networks for tomorrow by keeping unnecessary vehicles and pollution where they belong -- at the curb.

*Colin Cogle lives in New Milford and is a member CT Chapter Sierra Club*

# Are Electric Vehicles Really Zero-Emissions?

by Jeff Gross

Public policy, like engineering, requires trade-offs. For decades European authorities favored diesel vehicles as the low-carbon choice. Manufacturers responded by optimizing for efficiency. Unfortunately, manufacturers also allowed Nitrogen Oxides (NOx) to exceed the test-bed limits. The real world driving result indicated NOx was released many times over the limits. NOx gases are major pollutants that increase ozone levels, exacerbate respiratory diseases and are even carcinogenic.

Today, dozens of cities in Europe face driving bans for older diesels in an attempt to meet air quality standards. This engineering malfeasance, merely scandalous and dangerous in Europe, was in fact unlawful in the U.S. Connecticut will receive over \$55 million in a court settlement from Volkswagen for NOx mitigation.

**Dieselgate**, as the scandal is sometimes called, is just one chapter in the long story of Internal Combustion Engines fouling the environment world-wide. Think of Los Angeles smog, leaded gasoline or school buses enveloping children in particulate matter.

## Lifecycle EV Emissions

Do electric vehicles deliver on the promise of zero-emissions? “Yes” and “No.” Yes, battery-electric vehicles *do* operate emission-free when underway. This statement is not controversial and has positive relevance, especially in cities where internal-combustion vehicles produce their heaviest concentration of emissions.

Electric vehicles, however, incur costs and create emissions in the manufacture and disposal portions of their lifecycles, as all vehicles do. The electric vehicle industry is not yet mature enough to have fully developed battery reuse and recycle streams, but indications are that the magnitude of manufacturing emissions is only slightly higher than that of a conventional car and may be scaled back in the future.



Photo Caption: Bad Air Day, London

Photo Credit: [The Telegraph](#)

## Electricity Grid Realities

The motive force behind electric vehicles is electricity, generally from the public grid, and grids vary widely by geography in their emissions. A study by the Union of Concerned Scientist addresses both lifecycle and operational CO2 emissions by region. [Clean Vehicles](#)

The New England electric grid, compared to the rest of the country, is relatively clean, having shut down all but a few coal plants. So the study shows that a gasoline car in the New England grid area, would have to achieve 86 miles per gallon to have CO2 emissions comparable to a typical electric vehicle. NOx emissions are an even better story, because internal combustion engines produce 68 percent of NOx emissions, but electric utilities only 4 percent. [Air Quality](#)

If you drive an EV, how can you make your driving as green as possible? You can install your own solar panels and create green energy for your EV and your home. The greatest goal of installing solar panels might make economic sense for you if it represents a down payment on a future distributed smart grid. The larger opportunity, however, clearly lies in mustering the political will to increase the renewable content of our regulated grid infrastructure, enabling existing electric vehicles to emit less NOx, as well as all other uses of electricity, including heating and lighting. The journey to a cleaner, low-emission future will still require trade-offs, but they will be more earth-friendly trade-offs than the current grid's fuel mix.

### Take Action

Tell the following people you would like them to increase the renewable content of our regulated grid infrastructure.

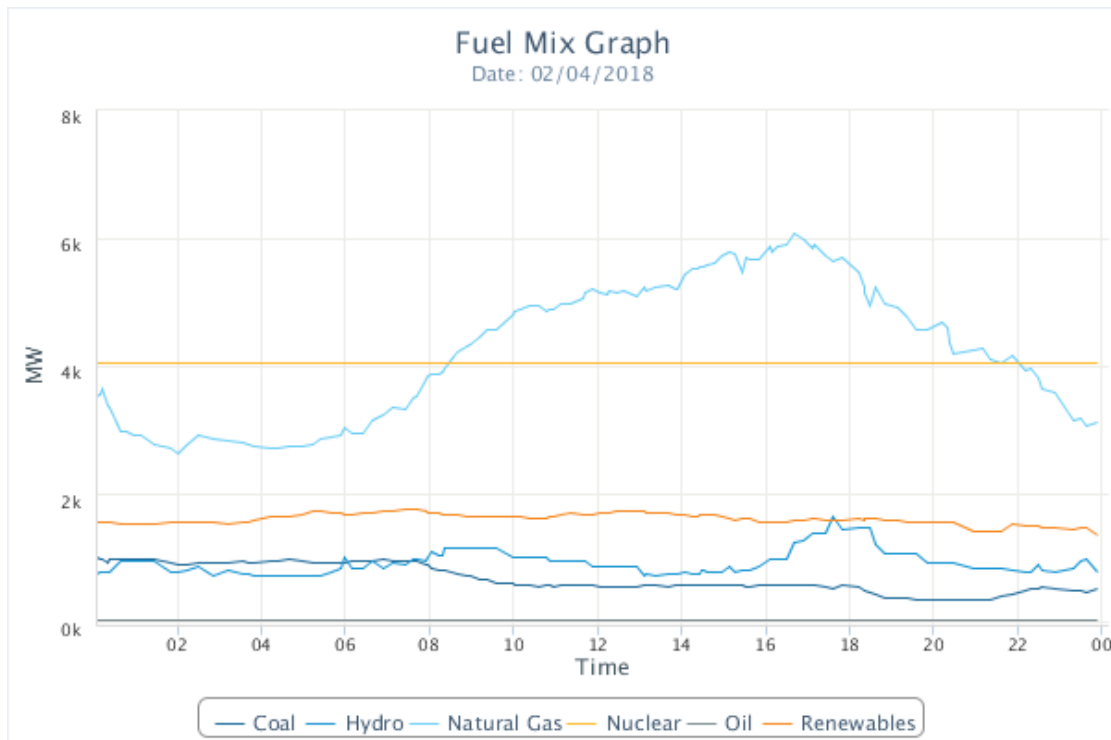
- Email your state senator and state representative

Find them easily at: [Find the here](#).

- Text the PURA chairperson at: 860.827.2807

Connecticut's Public Utilities Regulatory Agency (PURA)

As you can see in the graph below, renewables are the third line from the bottom and account for a small percentage of the fuel mix.



Fuels in Your Connecticut Electric Grid

Credit: <https://www.iso-ne.com/isoexpress/web/charts>

*Jeff Gross is Chair, CT Sierra Club Electric Vehicle Committee.*

# OUR NATURAL WORLD

## Our Lost Landmass: What Fossils Disclose

by Chase Brownstein

The time spent by humans on this planet is but a glimpse of the massive interval in which life has existed. To truly understand how our planet's ecosystems are changing in response to the threats of habitat destruction, resource depletion and climate change, we must turn to the data on past species.

We can look at how faunas (the animals of a particular region and time) responded to mass extinctions like the Permian-Triassic mass extinction, which occurred 250 million years ago and wiped out more than 90 percent of all species. We can search for ancient clues about recovery from events like the Cretaceous-Paleogene mass extinction, which famously wiped out the dinosaurs or the Pleistocene megafauna extinction, which seems to have been caused by humans. Finally, we can use data from these past events to inform our future attempts at tackling issues.

### Fossils Inform Biodiversity Declines Today

Surprisingly, the fossils of the Eastern seaboard have much to inform us about how to attack the biodiversity declines we now face. Ninety million years ago, due to sea level fluctuations, the eastern portion of North America was isolated and remained so for another 30 million years. That portion of the continent was a landmass known as Appalachia and was home to a terrestrial vertebrate fauna different from any other known from the Mesozoic era (250-65 million years ago). Tyrannosaurs with massive hands tipped with claws more than four inches long, duck-billed dinosaurs the size of double-decker buses bearing massive tails, huge relatives of modern alligators that left their bite marks on fossilized dinosaur bone and salamanders so elongated in form they resembled snakes. All lived 75 million years ago in what is now Trenton and Philadelphia. Many of these organisms were relic p-forms, not found anywhere else on the globe.



*A schematic of the landmass Appalachia (outline in green), with the present coastline in black and the remaining sediments of the same age as Appalachia outlined in red.*

### Isolation Changes Vertebrate Fauna's Form

In the case of Appalachian paleontology, we can learn a variety of things about the reaction of past forms to changes in their environment that might be useful today. These include how vertebrate faunas changed over time in response to their isolation (e.g., Gallagher, 1993; Brownstein, 2018); how natural disasters like storm surges harmed ecological communities and how those communities adapted over small and vast intervals (Main, 2013); finally how extinctions changed entire environments (e.g., Gallagher, 1993).

The Appalachian fossil record includes specimens of organisms that existed during at least two extinction events: the Cenomanian-Turonian anoxic event (~90 million years ago) and the Cretaceous-Paleogene extinction (~66 million years ago). Modeling both are relevant to addressing biodiversity declines. We know, for sure that the former event resulted from a decline in oxygen concentration in the oceans (e.g., Monnet, 2009).

By studying how different forms of life were harmed by these changes and adapted, we can understand better how to face, for example, the current issue of oxygen decline in our oceans. The beauty of Appalachia is that its treasures are right outside our doorsteps. We must simply start scanning the ground.

*Chase Brownstein is Research Associate at Stamford Museum and Nature Center and a member CT Chapter Sierra Club*

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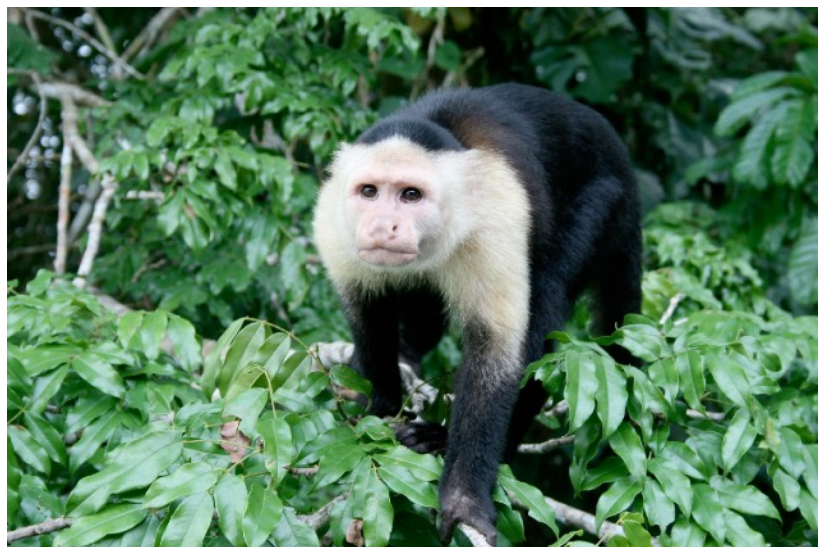
## Victory: “Monkey Rodeo” Canceled

by Annie Hornish

The Humane Society of the United States and several Connecticut-based groups are thrilled that the Hartford Yard Goats have canceled a June 2018 post-game promotional event called a “Cowboy Monkey Rodeo.” Their action came after an outpouring of concerned animal advocates from across the state.

The news arrived February 20th. The message read, “I wanted to let you know that today the Cowboy Rodeo Monkey show was canceled. They will no longer be coming to the ballpark-and never will!”-*Tim Restall, President, Hartford Yard Goats.*

In a “Monkey Rodeo,” capuchin monkeys are dressed in cowboy outfits and tethered to saddles on the backs of border collies who run at high speeds around a field herding four to five sheep. The dogs stop, start, turn, lie down and stand up abruptly as they herd sheep, causing the monkeys to be violently jerked forwards and backwards and slide wildly from side to side.



A capuchin monkey in the wild.  
photo credit: [peta.org](https://peta.org)

### **Inhumane Spectacles**

While marketed as entertainment, many people find this show offensive and it is undoubtedly frightening and harmful to the monkeys. A number of primate experts have expressed opinions that the act is abusive, subjects monkeys to psychological distress and the risk of being “seriously injured or killed” and recommend that these “inhumane spectacles should be stopped immediately.”

Although small, capuchin monkeys can be aggressive and inflict serious wounds. They have been involved in numerous escapes and attacks. During the “cowboy monkey” events, the monkey is not under the control of a human handler, but is at the mercy of a dog running wildly around a field. Spectators are at risk if a monkey gets loose from the dog or if a dog charges off the field.

### **Monkey Rodeo Tragedy**

In 2011, Tennessean native Tim Lepard’s monkey rodeo business (which has been called “Team Ghost Riders” and “Cowboy Monkey Rodeo”) was issued two summonses by New Hampshire Fish and Game for failure to obtain a state exhibitor permit and for allowing the public to touch the monkey used in his show. Lepard has also been cited by the U.S. Department of Agriculture for violating the minimum standards of the federal Animal Welfare Act, such as keeping animals in unsanitary conditions, failure to provide adequate crowd management and safety barriers, inadequate shelter, improper food storage, failure to dispose of expired deworming and heartworm preventive medications and repeatedly being unavailable for animal welfare inspections. Several years ago, all of Lepard’s monkeys, dogs and sheep died in his travel trailer from carbon monoxide poisoning.

Primates used in traveling shows are deprived of adequate space and opportunities to express natural behaviors, forcing these highly intelligent and social animals to spend most of their time confined to small cages, often alone; such substandard conditions cause primates to develop neurotic and self-destructive behaviors. If taken from their mothers too young, they can sustain emotional damage. In the wild, these highly intelligent, curious and energetic monkeys stay with their mothers for a few years, live in groups, and enjoy swinging from trees and exploring.

As animal advocates demonstrated, it’s within our collective power to stop these cruelties. We can vote with our dollars, and we can educate others. And we can let our elected officials know that we support laws that ban the use of exotic animals in entertainment.

*Annie Hornish is the Connecticut Senior State Director for The Humane Society of the United States and a supporting member of CT Chapter Sierra Club. Learn more at [humanesociety.org](http://humanesociety.org) and [blog.humanesociety.org](http://blog.humanesociety.org)*

# Why, What and How to Compost—Part 1

by Michele MacKinnon

Humor me. Open your refrigerator. Throw 40 percent of the food into a garbage bag and put the bag at the curb for collection. Next week, repeat.

This isn't as crazy as it sounds. An [article](#) in *The New York Times* says about 40 percent of the food grown in the US is thrown out. An average Connecticut resident's daily food waste accounted for 22 percent of the solid waste destined for landfills in 2015. Other solid wastes include organic materials, construction and demolition refuse, and paper products. Our state has a goal of reducing, reusing and recycling 60 percent of our waste stream by 2024. However, [achieving this goal is proving elusive](#). In the meantime, each person who composts food waste will make a positive difference.

## A simple bringing together

The word compost comes from two Latin roots, meaning “to bring together.” When moisture and oxygen are brought together with carbon-rich and nitrogen-rich organic materials, it spurs bacteria and microorganisms to decompose those materials. Instead of food waste languishing in a landfill, the compost produced is a rich dark humus, an elixir for creating and maintaining healthy soil.



Compost Materials

Photo credit: Jake Naughton/The New York Times

## Materials for composting

A typical homeowner has access to ample organic matter suitable for composting. Organic in this context means products derived from formerly living plant matter, not necessarily organic-labeled products. Organic materials can be divided roughly into two types.

**Browns** are carbon-rich materials. They are dry, aged items, such as fall leaves, twigs, plain cardboard, shredded newspapers and office paper and wood chips, shavings, or sawdust. Desiccated pruning or garden cleanup materials are good browns too.

**Greens** are fresher, nitrogen-rich ingredients. They are the fuel microorganisms need to start the decomposition process and keep it going. Greens don't have to be green. They include new spring leaves, untreated fresh grass clippings, spoiled fruit and vegetables or their peels; eggshells; coffee grounds and unbleached filters; tea bags; and fresh plant debris.



Compostable food waste: fruit and vegetable peels, coffee grounds in filter

Photo credit: Michele MacKinnon

**Unsuitable** materials are glued, painted, or chemically treated wood products, glossy or coated paper, glass clippings treated with herbicides, weeds with aggressive roots or seed heads, diseased plants and meat, dairy and oily wastes.

The smaller the pieces of greens and browns are, the faster they'll decompose, especially dense materials like broccoli stems or wood. Chopping food waste in a blender will lead to faster decomposition, but it's not essential.

### How the process works

A typical [rule of thumb](#) is to layer 2/3 browns with 1/3 greens, by dry weight rather than volume. For example, about six inches of dry leaves would be mixed with one inch of moist vegetable waste. Water each layer and turn it, ideally twice per month, with a garden fork or whatever tool works best, to introduce air. The materials can be stacked in an open pile or kept in a bin in a part-shade location.

Next time, I'll compare composting bins, solutions for composting issues, ways to use finished compost, and composting options for homeowners and renters who lack outdoor space.

*Michele MacKinnon, is a UCONN Certified Advanced Master Gardener, garden educator and speaker.*

*To ask gardening questions, email [beehappygardener@gmail.com](mailto:beehappygardener@gmail.com). We'll publish answers in the next edition of the newsletter.*

## ENVIRONMENTAL HEAT

### Documentary Recap: *Before the Flood*

*Before the Flood* is a climate change documentary starring and produced by Leonardo DiCaprio and sponsored by National Geographic. The film was shown at the Pequabuck River Watershed Association's Water Awareness Forum held Saturday, January 27th at the Bristol Public Library. Martha Klein, Chair, CT Chapter Sierra Club was a panelist who commented and answered questions following the screening.



DiCaprio begins the film with a reference to the painting, *The Garden of Earthly Delights* by Hieronymus Bosch. In this 15th century three part work, Bosch portrays Adam and Eve, the Deadly Sins and the Destroyed Paradise. It's an apt reference to our future if we continue to emit carbon into our atmosphere. We're living in the second panel — humankind before the flood. The charred blackened sky of the third panel will be ruin. If you close the triptych and look at the outer panels closely, you view a pristine earth, before creation of human life.



Hieronymus Bosch, *The Garden of Earthly Delights*, oil on oak panels, Museo del Prado, Madrid

With fair warning we hear from spokespersons on climate. Ban Ki-moon, the eighth United Nations Secretary General warns climate change catastrophic news about the environment is seen and heard daily, but people tune out the message.

Sierra Club Executive Director, Michael Brune tells us there is no such thing as clean fossil fuel. Al Gore, former Vice President of the United States originally tutored DiCaprio on the issue of the release of carbon dioxide (CO<sub>2</sub>) by stating, the “polar ice caps will melt and the seas will rise.” Di Caprio shows with film everything the Vice President said is real and is happening now.

### **How Far Have We Gone?**

In the Arctic, we see the sea where ice used to be solid, blue and hard, but now is like ice cream. Scientists tell us by 2040 there will be no sea ice left in the Arctic and ships will be able to sail across.

Closer to home, south Florida could be washed away by rising seas; Florida is the key state for the impact of climate change. Water is already backflooding into cities through drains. A huge portion of the world's population live near oceans; migrating populations around the globe related to climate change are already causing strain and wars.



**Facts:** Ice is melting, Earth is warming, Sea level is rising. We have to cool the planet to repair it. Our planet is reaching a breaking point; its irreparable destruction will happen over a period of a few decades.

### **What Are the Causes?**

Carbon pollution is the major factor in global warming. Some climate deniers try to discredit scientists who have devoted their lives to studying climate, but the climate problem has been known for half a century within which time, the population increased by five billion people.

Although China is the world's number one polluter, it is also the world's manufacturer. India is the third largest polluter, but its development is bringing millions of people out of poverty. To provide every Indian with access to energy, instead of 700 million households burning cow dung for cooking, India intends to tap their huge reservoir of coal. Coal is cheap. If India moves to coal the pollution will be enormous.

### **The Profligacy of America**

The U.S. is a fossil fuel addicted nation. Our energy use is up to sixty-one times that of energy used by a Nigerian. The U.S. is the second largest emitter of greenhouse gases in history and India and China are doing more investment in clean energy than the U.S. We should be working on how to provide clean energy for a billion people In the World who don't have lights.

In fueling our addiction, we've knocked down eco systems and sea life. One billion people depend on fish living within coral reefs, but we are causing starvation since fifty percent of coral reefs are gone. The biggest impact will be more drought that will help incite civil wars because of lack of food.

### **The Role of Business**

In Sumatra, Indonesia fires are set intentionally to create palm oil. When forests are cleared and fires are lit, it is as a carbon bomb releasing massive amounts of carbon into the atmosphere.

Forest fires affect the life of people and species of rhinoceros, elephant and orangutan. Additionally, this tropical deforestation enables human expansion. About eighty percent of the country is now without forests.

If palm oil is the cause, we can stop buying any food with palm oil. But, how can we avoid palm oil if it's in everything we buy? Therefore companies, too are destroying our planet.

### **Is There Anything We Can Do to Stop It?**

Here are some actions the film recommends we can take.

Beef is one of the most inefficient resources on the planet because cows produce methane, a powerful greenhouse gas. Methane is even more impactful than CO<sub>2</sub>. Ten to twelve percent of total emissions in the U.S. are due to beef which also require fifty times the amount of land to graze than chickens. It's fairly easy to switch our diets from beef to chicken.

We need new power sources and we need to fight the powerful fossil fuel industry, the biggest industry in the world. Batteries are critical to provide energy in the future. We don't need electric plants, we need to build solar power to charge batteries.

We must levy a carbon tax; it may be the silver bullet for climate change. We should tax whatever puts carbon in the atmosphere. A carbon tax will nudge people to do right thing, We have to change the public view on a carbon tax.

Our intent should be to leave the planet in better shape than we were given it. We are not doing that today. Instead, we are hitting the ceiling on what the planet can cope with. We're at a tipping point. The Paris Climate Accord window is barely open to transition back to a stable planet.

It's up to all of us to consume differently and vote for leaders who will fight climate change.  
[beforetheflood.com](http://beforetheflood.com)

### **Take Action**

Visit this website to see how your state Senator and state Representative are voting on climate issues: [votesmart.org](http://votesmart.org).

To find the names of your state legislators, go to: <https://www.cga.ct.gov/asp/menu/cgafindleg.asp>

## EDUCATIONAL PROGRAM

### Legislative Update and Songbirds of the Northeast

**Speakers:** Laurie Julian, Legislative Lobbyist  
John Root, Naturalist

**Date:** Thursday, March 8th

**Time:** 7:00pm activist letter writing - 7:30pm program

**Sponsor:** Greater Hartford Group Connecticut Sierra Club

**Location:** Westmoor Park, [119 Flagg Rd, W. Hartford, CT](#)

**Refreshments:** Provided

**Donation:** \$4 requested to defray hall rental

**Questions:** Email Renee [HERE](#)

*Free and open to the public*

#### Overview

Laurie Julian will deliver a legislative update on topics including bottle bill expansion, open space preservation, restoring funds for energy programs, water as a public trust and fracking.



John Root will present photographs and recordings of our region's songbirds

## ENVIRONMENTAL BOOKS FOR CHILDREN

### Save Energy Save Dinero™

#### An Environmental Journey for Children and Families

by Leticia Colon de Mejias

A frog named “Dinero,” the Spanish word for money is the hero of a series of childrens’ books. “Dinero the Frog Learns to Save Energy” is the first. The books take Dinero and his friends on a journey in which they learn where energy comes from, the types of fuel we use to generate electricity, how we can save energy and protect the environment and most importantly why we should save energy. .

Dinero's story is a family's journey to change personal choices and actions. They are challenged to change the world for the better as the heroes and villains encourage the children and their families to take daily actions, to learn more and to become superheroes themselves. The superheroes are the Green Eco Warriors, a diverse set of non-traditional minority urban youth with whose cohort readers can identify.

### **The Journey for Environmental Knowledge**

In the books and graphic texts, Dinero and the Green Eco Warriors take many journeys. They meet new friends, fight new villains, research other environmental issues (e.g., genetically-modified crops, phantom power and renewable energy sources) and learn to become Green Eco Warriors for positive change. Dinero is always learning and growing from his journeys. In "Defeating the Phantom Draw," Dinero and the Green Eco Warriors have to fight the Phantom Draw, an evil villain whose source of power comes from the wasted "phantom" energy from phone chargers and electronic devices that remain plugged in. They can only defeat him by literally draining his power.



Dinero and the Green Eco Warriors  
Artist: Myron Brewer

Dinero's focus is always on positive choices, self-empowerment, science and leadership. In "Pesky Plastic," children are educated about how plastic has permeated nature and threatens wildlife and ecosystems. Readers are challenged to take actionable steps to curb their use of plastic and dispose of it properly.

Green Eco Warriors is the name of a not for profit organization that reaches out to urban and minority populations and all youth and families. At Green Eco Warriors the intent is to make difficult environmental topics digestible, relatable and actionable. They work to engage youth and families in scientific concepts through visuals and language with humor and slang thrown in to keep readers engaged. See: [greenecowarriors.org](http://greenecowarriors.org)

Over the years, the illustrations have developed into works of art. The books and graphic texts have received awards, but the best award is the one they receive every time they walk into a school and the kids yell out, "Dinero My Hero!" or "Save Energy, Save Dinero! Defeat the Phantom Draw!" In that moment we think, "One day all children will want to be Green Eco Warriors and save our planet."

*Leticia Colon de Mejias is president, Green Eco Warriors, a 501(c)(3) non-profit creating a culture of sustainable thinkers through lessons and tools that incorporate environmental, health, and social perspectives. She is a donor to CT Chapter Sierra Club.*

## TELL A FRIEND

If you agree with the Sierra Club principles of exploring, enjoying and protecting our state, country and planetary environment, and you enjoy reading the Quinnehtukqut, why not tell a friend? Invite people to join the Sierra Club. It's easy. Go to our website and click the blue **JOIN** or the red **DONATE** button in the upper right corner. Follow the directions.

You can also give memberships as gifts. It's a wonderful way to honor your friends and family or perhaps enlighten them.

For gift memberships, go to:  
[Gift Memberships](#)

## POETRY

### Fiendish Teeth

Fiendish teeth  
Stone giant's revile  
Dripping down  
In a frozen smile

Guardian strong  
Of a hidden lair  
Warming breath  
Is its only fear

Roots and stumps  
In a twisted heap  
Grotesque ramparts  
At the gelid keep

Strewn in fits  
Upheaval rage  
Bar the path  
To Winter's cave

Weak pale light  
Possess no power  
Crystal fangs  
Bide the darkening hour

Icy daggers  
Bite flesh and bone  
Den concealed  
Never more alone

Throughout the woodland  
Presence felt  
Grip of cold  
'Till solstice' melt

*Vince Jennetta is a CT Chapter Sierra Club member who lives in Burlington. He does most of his hiking in the Burlington area along the various sections and offshoots of the Tunxis Trail.*



Tunxis Trail in Winter

# PHOTOGRAPHY

## Old Furnace State Park, Killingly, CT

Photographer: Sarah L. Hamby

<https://www.instagram.com/crazyhikerchick/>



"I have a camera with me most of the time and occasionally do well with it. At this time of year, I thought we could do with a spot of color."

Sarah is a member of the Sierra Club Military Outdoors program and attended the 2017 fall program in Chaplin.

She typically goes wandering alone with her camera. She has worked Trail Maintenance on the Adirondack Trail, (AT), many White Mountain Trails, the Pacific Crest Trail (PCT) in California and the Continental Divide Trail (CDT) in Colorado. "I am grateful for the opportunity to have had positive impact on trails across the country."



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