



The Chapter's Maine Woods Team wants to help make carbon sequestration a profitable alternative.

Small Woodlot Owners Can Play a Significant Role in Maine's CO2 Reduction Efforts

The Earth's CO2 levels reached a record high in May, 2019. And while we strive toward a global, all-out emissions reduction effort to avoid the worst effects of climate change, there is another climate solution that can help in addressing the climate crisis—trees.

No, trees alone won't save the planet. But, coupled with an aggressive move away from fossil fuels they can make a big contribution.

The recent fires in the Amazon have increased awareness of the importance of forests in sequestering carbon from the atmosphere and keeping the world habitable. Trees do this through the process of photosynthesis—absorbing CO2 from the air and transforming it into carbon-rich sugars. Forests in the US currently sequester 10-13 percent of all domestic emissions annually. With increased preservation, reforestation, afforestation, and good forest management, that percentage could easily grow to 20 percent.

The temperate forests of the Northeast are an especially important carbon sink, and the Maine Woods is the region's crown jewel. Ninety percent of Maine is forested, absorbing about 12 million tons of CO2 emissions per year. That is about 72 percent of Maine's annual CO2 emissions, according to the Energy Information Administration.

That's pretty impressive, but Sierra Club Maine's Denny Gallaudet would like to see the ratio increase. Gallaudet owns a 25-acre woodlot in Cumberland and, as leader of the Maine Woods team, he wants to find ways for small woodlot owners to profit from keeping their forests largely unharvested for the purpose of carbon sequestration. Toward that goal, he's hoping to work with other interested groups, such as the Maine Organic Farmers and Gardeners Association (MOFGA).

"There are some 25,000 small woodlot owners in Maine," Gallaudet says. "They own more than 35 percent of Maine's forestland and they could play a big role in increasing carbon sequestration in the state."

The roadblock for that happening is financial. Current carbon credit programs are only financially viable for landowners with significant acreage—they have been effectively utilized by groups with large, unmanaged forests such as the Appalachian Mountain Club and the Nature Conservancy.

According to Gallaudet, you need roughly 2,500 acres of forest to make the costs of getting certified for the carbon credit program profitable. That's because



The Maine Woods Team's Denny Gallaudet leads a tour of his 25-acre, low-impact woodlot in Cumberland.

"...By making carbon storage financially viable for small woodlot owners, Maine forests can help bring the state's carbon emissions to net zero."

of the very high upfront costs to have a woodlot certified under the California or the Regional Greenhouse Gas Initiative (RGGI) carbon credit standards. California's program, the country's primary one, pays up to \$15 per ton of CO2 sequestration. The RGGI program is less attractive, paying only \$5 per ton.

Fifteen dollars a ton doesn't sound like much. But trees sequester a surprisingly large amount of CO2,

depending on a good deal on their age. The older the forest, the greater the amount of CO2 it will sequester.

"Fifteen dollars per ton is profitable for a large landowner," Gallaudet notes. "It's comparable to what you would get for commercial-use harvesting, and you can recover your initial certification costs without a problem. But if you're a small woodlot owner with just 50 or even 500 acres, the high upfront cost can be prohibitive."

Gallaudet would like to see that change.

"We have to find a way for small woodlot owners to utilize the carbon credit program," he says. "And that means lowering the certification expense."

Gallaudet says one big problem is that there are no certifiers in Maine. They need to be flown in from California at considerable financial cost in staff time and expenses.

And the California program doesn't allow aggregate markets. Small Maine woodlot owners can't join together to apply and be certified as a group.

With his newly formed Maine Woods team, Gallaudet wants to address the problem in several stages. The first is through raising public awareness—spreading the word about the important

role forests can play in addressing the climate crisis, and, in particular, the contribution Maine's small woodlots can make to the effort.

"We want folks to know how significant Maine forests are in taking CO2 out of our atmosphere," he says. "And we want to promote the idea that, by making carbon storage financially viable for small woodlot owners, Maine forests can help bring the state's carbon emissions to net zero."

By raising awareness of the issue, Gallaudet and his team hope to foster legislation by 2021 that will address the obstacles to small woodlots taking part in carbon credit programs. He's encouraged by the fact that this issue was addressed in a bipartisan bill introduced by Representative Ralph Tucker and later folded into Governor Mills' Climate Council bill, now enacted.

One possible way of addressing the issue is by supplementing Maine's current Tree Growth program to include sequestration incentives. Currently, the primary intent of the program, which has 3,500 participants, is to grow forest products. To qualify, a woodlot owner must have 10 acres, a thorough harvest and management plan, and requires recertification every 10 years.

Gallaudet, who is enrolled in the Tree Growth program, would like to see a forest carbon program initiated—a supplemental program that would encourage and reward carbon storage. Such a program would require a sustainable forestry management plan, a carbon inventory, low-impact harvesting practices, recertification every 10 years, and most importantly a reasonable carbon capture credit.

-Continued on page 2



Sierra Club Maine
565 Congress St., Suite 206B
Portland, ME 04101

Non-Profit Org.
U.S. Postage Paid
Ellsworth, ME
Permit No. 82

Reforestation is Important: But It's Not a Silver Bullet

Yes, plant trees, but let's put more emphasis on protecting the forests and ecosystems we already have.

In July, a group of European researchers published a study announcing that we already have the technology to tackle climate change: trees.

The study, published in the journal *Science*, identified 1.7 to 1.8 billion hectares, or roughly 6.5 million square miles, of suitable land around the world not currently being used for agriculture or urban development that could be planted as forest.

Adding cropland and urban areas to that would create another 5.4 million square miles of forest and another 2.7 million square miles of canopy. In comparison, the total land area of the United States, including Hawaii and Alaska, is 3.5 million square miles.

The results of such a huge eco-restoration would be massive. Once mature, the study argues, those forests would sequester about two-thirds of all the carbon released by humans since the start of the Industrial Revolution, and reduce atmospheric CO₂ by 25 percent. But other ecologists and scientists aren't as convinced.

Karen Holl of the University of California, Santa Cruz, who has studied reforestation in the tropics for two decades, says she supports reforestation efforts, and they do have a place in fighting climate change. But she argues that the new paper is too simplistic and grossly overestimates the potential for reforestation to reduce CO₂. Holl's research shows the amount of carbon tropical forests can hold depends on a variety of factors, including the intensity of past disturbance by humans, invasive species, and wildfires.

Holl still sees huge potential in reforestation as a way to sequester carbon.

"No one is disputing that," she explains. "The question is how much. I have a 15-year study of tropical forest recovery in southern Costa Rica, and we see a huge range in the rates of recovery, both in planted and naturally regenerating sites....Saying forests can sequester the maximum amount is overly optimistic."

She also takes issue with the study's map, which she says shows areas that were traditionally grassland, as potential reforestation sites. Not only would that destroy habitat for species that depend on grass-

lands, she argues, it's also a recipe for failure: Trying to grow forest on grassland has traditionally been unsuccessful.

Attempts to reforest our way out of climate change have also resulted in questionable policies. In 2011, Germany and the International Union for Conserva-



tion of Nature launched the Bonn Challenge to reforest 150 million hectares, or 5.8 million squares miles across the globe, by 2020 and 350 million hectares by 2030. However, the 48 nations that agreed to the challenge are not on track to reach that 2020 goal. Half of the pledges so far, a recent study found, are for tree plantations, which release much of the CO₂ they sequester back into the atmosphere every 10 to 20 years when the tree farms are logged. The authors of that study argue that the definition of reforestation should be tightened and only projects that allow forests to develop into their mature, diverse, carbon-capturing state be included.

The other problem with relying on reforestation to combat climate change is the timeline. Large-scale reforestation needs to occur almost immediately if it's going to have an impact on the efforts to limit climate change to 1.5° or 2°C of warming. "[It] will take decades for new forests to mature and achieve this po-

tential," Thomas Crowther of ETH Zürich (a science/technology university) acknowledges. "It is vitally important that we protect the forests that exist today, pursue other climate solutions, and continue to phase out fossil fuels from our economies in order to avoid dangerous climate change."

That's a sentiment echoed by Holl, who points out that deforestation has actually increased in places like Brazil while palm oil plantations in Southeast Asia drive deforestation in other tropical forests. Logging in the Canadian boreal forests has also ramped up in recent years. Any carbon sequestration gained from reforestation, says Holl, is moot if we're still losing old growth, natural forests.

Reforestation isn't just about putting as many trees into the ground as possible, writes Spencer Plumb, who works on reforestation issues with the National Forest Foundation, in an email about the study. "Tree planting needs to be done not just as a way to sequester carbon but as a way to restore forested ecosystems, which provide wildlife habitat, clean water, and recreation opportunities," he says.

When done without proper research, reforesting using the wrong trees or methods can be disastrous.

In other words, restoration is complicated. We, and the planet, would be better served by a holistic approach that restores the entire ecosystem, not just the trees, and works hard to protect the forests we do have.

"Restoring forests is a good thing," says Holl. "It's a good thing for carbon capture, for conserving species, for water quality. But it's just not a silver bullet. We can't plant our way out of the climate crisis. There are certain places, like the Amazon, where we need to do whatever we can to keep existing forests that are there. It's so much harder to get the forests back than protect what we have."

This is an abridged version of an article by Jason Daley that originally published in Sierra magazine. To read the entire article go to <https://www.sierraclub.org/sierra/trees-alone-can-t-save-us-climate-change>

Small Woodlot Owners and Carbon Sequestration

Continued from page 1

"We do this now with the incentives for electric vehicles and solar energy at both the federal and state level" Gallaudet explains.

One other important factor is having foresters right here in Maine that are trained and qualified to certify and recertify the woodlots. If woodlot owners let their carbon storage go down, or left the program, there would be penalties, as in the current Tree Growth program.

Utilizing qualified Maine foresters would help bring the certification cost for a small woodlot owner down to a more affordable level.

Gallaudet sees carbon credits as effective, elegant market solutions—ones that would provide incentives for more woodlot owners in Maine to preserve their trees for carbon storage, while benefiting society at large. But he adds the markets need to be regulated and encouraged by government policy.

University of Maine forestry Professor Ivan Fernandez, agrees that incentive programs are needed in Maine and elsewhere to maximize the potential for forest carbon sequestration. And as a society, he says, we need to recognize the value of our forests.

"This is a complex question," Fernandez says. "We need to develop financial incentives to recognize the value to society of healthy forests and their contribution to carbon sequestration (also to clean air, wildlife, recreation, clean water, etc). The costs of using forests as part of our climate toolkit is shared by all of us because all of us benefit—not just the land manager or owner who receives the carbon credits."

Gallaudet, a retired bank president and former school superintendent, maintains and harvests his

25-acre woodlot with help from his son-in-law, Eli Wilson. In consultation with MOFGA, he voluntarily implemented low-impact forestry practices, because, "It was the right thing to do."

He cuts four cords a year from the woodlot to supplement heating his house and periodically sells saw logs to a local log yard. When harvesting he uses a small tractor with rubber tires. The tractor has a rear-mounted skidding winch, which leaves no skidder trails in the woodlot.

"Twenty percent of the carbon from a tree is in the ground," he explains. "You don't want to disturb that or CO₂ will get released."

Gallaudet's practices also include leaving old-

er, legacy trees untouched. The older a tree the more carbon it stores. In fact, some research suggests that almost 70 percent of all the carbon stored in trees is accumulated in the last half of their lives.

Walking through his own woodlot, Gallaudet points to a big old pine, which he calculates stores six tons of carbon. Older hardwood trees would store even more.

Low-impact practice also includes leaving dead trees in place, because, Gallaudet explains, they actually continue to store carbon for a longtime after dying, preventing the CO₂ from quickly being released into the atmosphere.

For the same reason, he leaves dead limbs and brush in the woodlot—gathering it into brush piles. Like dead trees, they will release CO₂ as they decompose—but slowly. And as they decompose they provide nutrients to the soil and homes for wildlife.

Gallaudet says that the motivation to help small woodlot owners implement low-impact forestry and carbon sequestration came from what he experienced with his own woodlot.

"The new growth in my 25-acres absorbs roughly 100 tons of CO₂ a year," he says. That's many times greater than the four tons of annual CO₂ emissions from his home and vehicles.

"That got me thinking of the potential for reducing CO₂ if we could get a large number of small woodlot owners to use their land for sequestration," he says. "But for that to happen, we need to provide incentives."

To join the Maine Woods team efforts, contact the Chapter office at maine.chapter@sierraclub.org or Denny Gallaudet at denny.gallaudet@gmail.com.

Carbon or CO₂?

With the growing awareness about emissions and climate, the terms carbon and CO₂ (carbon dioxide) are often used interchangeably. That can lead to misinformation and confusion.

Carbon is an element. Carbon dioxide is a compound, made up of one carbon atom and two oxygen atoms. A carbon atom weighs 12 atomic mass units. Each oxygen atom weighs 16. Thus, CO₂ has significantly more mass than carbon—3.67 tons of CO₂ would contain 1 ton of carbon.

What trees absorb from the air is CO₂. Through photosynthesis, trees release the oxygen in CO₂ and the carbon is stored in the tree, above and below ground. *Sequestration* includes both the absorption of CO₂ and the storage of the carbon.

Sierra Club Joins Lawsuit Over Weakening of Endangered Species Act

Trump Administration changes would make it harder to protect threatened wildlife.

In late August the Sierra Club joined forces with Earthjustice and numerous other environmental and animal protection groups to sue the Trump administration over new regulations that dramatically weaken the Endangered Species Act (ESA).

The lawsuit makes three claims against the federal government's new rules:

- 1) The Trump administration failed to publicly disclose and analyze the harms and impacts of these rules, in violation of the National Environmental Policy Act;
- 2) The administration inserted new changes into the final rules that were never made public and not subject to public comment, cutting the American people out of the decision-making process.
- 3) The administration violated the language and purpose of the Endangered Species Act by unreasonably changing requirements for compliance with Section 7, which requires federal agencies to ensure that actions they authorize, fund, or carry out do not jeopardize the existence of any species listed, or destroy or adversely modify designated critical habitat of any listed species.

The new regulations are an unprecedented weakening of protections for endangered species. Among



other things, they: allow consideration of economic factors in decisions about whether species are listed as threatened or endangered; strip newly listed threatened species of automatic protection; weaken protection of species' critical habitat; and relax consultation standards that are meant to ensure federal agencies avoid jeopardizing species' survival.

On September 17 states filed their own lawsuit to block the new Trump administration rules.

"The new rules move the Endangered Species Act dangerously away from its grounding in sound science that has made the Act so effective -- opening the door to political decisions couched as claims that threats to species are too uncertain to address," said Karimah Schoenhut, Sierra Club staff attorney. "In the face of the climate crisis, the result of this abandonment of responsibility will be extinction."

Earthjustice attorney Kristen Boyles stressed that nothing in the new rules helps wildlife.

"They make protection and recovery of threatened

and endangered species harder and less predictable. We're going to court to set things right."

The National Resources Defense Council's Rebecca Riley noted that the weakening of the ESA is an especially egregious action in light of what is happening to species around the globe.

"In the midst of an unprecedented extinction crisis, the Trump administration is eviscerating our most effective wildlife protection law," Riley said. "These regulatory changes will place vulnerable species in immediate danger—all to line the pockets of industry. We are counting on the courts to step in before it's too late."

The Endangered Species Act was signed into law in 1973. For over 40 years, the ESA has been a remarkably successful conservation law that protects imperiled species and their habitats. In the years since it was enacted, a remarkable 99 percent of listed species (220 species) including the bald eagle, Florida manatee, the humpback whale, and the gray wolf have been spared from extinction.

Sierra Club, Earthjustice Go to Court Over Trump's Attack on California Emission Standards

Maine joins 22 other states in filing a second lawsuit against the federal policy.

On September 27 Earthjustice and the Sierra Club, along with a coalition of other environmental groups, filed a lawsuit against the Trump administration for its attack on California—stripping the state's authority to set more stringent greenhouse gas (GHG) vehicle standards than federal standards, and rescinding its Zero Emission Vehicle (ZEV) mandate.

The lawsuit from the environmental groups, which focuses on the National Highway Traffic Safety Administration's decision to preempt the California GHG and ZEV standards, comes on the same day that agency action was officially published in the Federal Register, and a week after California and nearly two dozen other states, including Maine, filed their own lawsuit against the attack on clean cars.

The Trump administration's decision to invalidate California's Clean Car Standards has wide-reaching implications; it also affects the population in 14 states plus D.C. that have adopted these stronger restrictions on pollution from cars, including 11 states that have adopted the Zero Emission Vehicle standards. The Clean Car Standards protect the environment and the public health of more than 118 million people, upwards of 40 percent of the US population.

"We won't be idle in the face of the Trump administration's dangerous zeal to pump the brakes on our nation's most effective climate policy. Strong, clean car standards are a win for the environment, public health, and consumers," said the Sierra Club's Chief Climate Counsel, Joanne Spalding.

Spalding added that the environmental groups are challenging what is "a misguided rule to defend the long-standing rights of states to protect their communities from tailpipe pollution."

Earthjustice staff attorney Paul Cort emphasized that California's standards make cars safer and better for the environment and our health. "We're suing to protect people's right to a safe and healthy environment," he explained.



The Stakes Could Not Be Higher: Let's Get Ready!

The 2020 election season is here, and, as far as the environment is concerned, the stakes could not be higher. The window of opportunity for action to effectively avert the worst effects of climate change is closing. It's imperative that we elect enlightened, forward thinking candidates at both the state and federal level.

The year 2020 also marks the 100th anniversary of women's right to vote. That anniversary can serve to remind us that we can't take our democracy for granted and also inspire us to become better informed about, and engaged in, the electoral process.

As in previous elections, Sierra Club Maine's Core Political Team (several committed volunteers) will review and endorse electoral candidates, both federal and state, for your consideration. Our core political team is already reviewing the voting records of Maine's state and federal incumbents, and we will begin reviewing the challengers as they come along. This year we are gearing up early to make sure the best environmental candidates are elected. The price of anything less is too great.

We need your participation to make that happen! Not just with your vote, but with your active support on behalf of endorsed candidates. The core political team is gearing up for this important election year and we urge you to join our efforts to put strong environmental advocates in office. It will take all of us!

If you have an interest in being part of the core political team, contact us at maine.chapter@sierraclub.org. We'd welcome some new members!

Key Election Season Dates

- February 3, 2020 - Deadline for collecting signatures for ballot initiative to put CMP's transmission line project to a people's vote in the 2020 election season
- March 3, 2020 - Presidential Primary Elections and People's Veto (vaccination issue)
- March 7, 2020 - Republican Municipal Caucuses
- March 8, 2020 - Democratic Municipal Caucuses
- March 16, 2020 - Filing Deadline for Federal and State Candidates
- April 23-25, 2020 - Republican District Caucuses and State Convention
- May 29-31, 2020 - Democratic Maine State Convention
- June 6, 2020 - Primary Election: State, US Senate and US House
- July 13-16, 2020 - Democratic National Convention
- August 24-27, 2020 - Republican National Convention
- November 3, 2020 - General Election

Note: Ranked Choice Voting will apply to all primaries and federal races in the general elections.



Governor Mills addresses the United Nations and calls on World Leaders to take action."

"Maine Won't Wait. Will You?"



Maine Governor Janet Mills stood before world leaders at the United Nations General Assembly on September 23 and challenged them to take bold action against climate change.

Mills asked the Assembly what was more precious than the health and happiness of our children.

"For all of them, today, by executive order, I am pledging that Maine will be carbon neutral by 2045."

"And if our small state can do it, you can. We've got to unite to preserve our precious common ground, for our common planet, in uncommon ways for this imperative common purpose," Governor Mills continued. "Maine won't wait. Will you?"

Mills' executive order requires the newly formed Maine Climate Council (see story on this page) to provide recommendations no later than December 1, 2020 on ways to achieve a carbon neutral economy in Maine by 2045. The Maine Climate Council met for the first time on September 26th.

The executive order also calls on the Maine Department of Environmental Protection to develop a framework for accounting and tracking progress on greenhouse gas reduction, and report on the progress every other year. It also directs that all actions taken to achieve carbon neutrality must grow Maine's economy, protect our natural resources and achieve positive impacts for the people of Maine.

Mills' address before the United Nations was a first for a sitting Maine governor.

She was personally invited to speak by UN Secretary-General Antonio Guterres, and her remarks come as part of her participation in the UN Climate Action Summit 2019, which brings together governments, the private sector, civil society, local authorities and other international organizations to develop ambitious solutions to climate change.

"It was a tremendous honor to speak before the United Nations, but what I am even more proud of is that the State of Maine is leading in the fight against climate change," Mills said.

The following day she also participated in a bilateral meeting with officials from the European Union to discuss how the US and Europe can work together to combat the climate crisis.



Among those at the Saco Bay Climate Action Team planning team meeting were (left to right) Climate Action Advisory Team leader Joan Saxe, Chapter Director Alice Elliott, Chapter Communications Assistant Matt Cannon, and Maine State Senator Justin Chenette. Also on the team are State Representative Maggie O'Neil and Lynn Copeland, a Saco city councilor.

New Climate Action Team Forms in Saco Bay Region

A planning meeting for the newly-formed Saco Bay Climate Action Team took place on August 27. The towns of Saco, Biddeford, and Old Orchard Beach will be the focus of the new team's activity. One of the planning team leaders, State Senator Justin Chenette stressed the importance of grassroots efforts in the face of federal inaction on climate issues.

"Our entire way of life in Maine is at stake if we do nothing," he said. "Our area around Saco Bay is fired up to advocate for the kind of change the youth of the world are rightfully demanding."

To get involved with the new Saco Bay CAT, or to find out how you can start a climate action team in your area, email maine.chapter@sierraclub.org

Maine Climate Council Begins Its Work

The 39-member bipartisan group will develop a plan for meeting the state's ambitious emission goals.

The newly-formed Maine Climate Council held its first meeting on September 26. The 39-member bi-partisan group heard inspiring speeches from Maine Governor Janet Mills and Obama environmental Protection Agency Administrator Gina McCarthy.

A standing room crowd of some 200 people attended the Climate Council launch. A video of the meeting is available by googling *youtube maine climate council*.

In stressing the need for bold action, Mills referred to Swedish climate activist Greta Thunberg's remarks to the United Nations when she told world leaders: "Change is coming whether you like it or not."

"Thousands of Maine students joined that chorus, and they mean business, too," Mills said. "They won't stand for it. It's their future that's at stake."

In her high-energy speech, McCarthy stressed the importance of grassroots action.

"Nothing innovative starts at the federal level," said McCarthy, now director of Harvard University's Center for Climate, Health, and the Global Environment. "Everything starts at the local levels."

The Climate Council, which was proposed by Governor Mills in April and passed with bi-partisan and overwhelming support in the legislature, is charged with establishing strategies and initiatives to help the state meet its greenhouse gas reductions and renewable energy generation targets as it works to combat climate change, and to make sure our communities, industries and people are resilient to the changes our state is facing.

The Council is comprised of several department commissioners, key state leaders, science and technical experts, business and nonprofit leaders, municipal leaders, a tribal representative, and a representative of Maine youth. It is co-chaired by Hannah Pingree, Director of the Governor's Office of Policy Innovation and the Future, and Jerry Reid, Commissioner of the Department of Environmental Protection.

"Governor Mills has made tackling climate change one of her top priorities and, from ushering in renewable energy to establishing the Climate Council, she's already taken significant action," said Hannah Pingree. "The future of Maine's communities, our state's economy, and the lives and health of our citizens depends on us stepping up to confront the challenge of climate change. I look forward to leading Maine's Climate Council as we work to meet our emission reduction targets, create new clean energy jobs, and improve the resilience of our communities. The evolving science on climate is daunting, but the future world we leave to our children depends on our actions."

The Climate Council will also convene several working groups from within its membership—including a Scientific and Technical Subcommittee, a Transportation Working Group, a Coastal and Marine Working Group, a Natural and Working Lands Group, and others—to focus on how the state can tackle challenges within these specific areas. In addition to recommending new policy and innovative strategies to reach these emission and energy goals, the Council will update the Maine State Climate Plan every four years, and will solicit input from the public and report out progress on its goals every two years to the people of Maine. The first climate action plan is due to be submitted to the legislature by December 1, 2020.

Under Governor Mills' leadership, Maine has set statutory goals of reducing greenhouse gas emissions by 45 percent by 2030 and at least 80 percent by 2050. She has also signed legislation to increase Maine's Renewable Portfolio Standard to 80 percent by 2030 and set a goal of 100 percent by 2050.

Megadams and Transmission Corridors: Bad News For Indigenous Peoples and the Planet

Despite its hype as a renewable energy source, large-scale hydropower is neither clean nor green. Beyond that, it's creating major social justice issues in Canada.

Quebec's premier and Hydro-Quebec want to significantly increase the amount of hydropower they sell to the Northeastern U.S. Sadly, New England governors, including Maine's governor, are ready to buy it.

They're buying it because of pressures to reduce carbon emissions and the misguided thinking that large-scale hydropower is clean. But the fact is that large-scale hydro is neither clean nor green. Megadams which produce the electricity, and the transmission corridors that bring it south cause real environmental destruction. In addition they create major economic, social, and cultural damage to Canada's Indigenous communities.

One of the most recent examples of megadams' threats to Indigenous communities is the Muskrat Falls dam in Labrador. Ignoring a 2016 Harvard study showing that 99 percent of dams expose indigenous populations to dangerous levels of methylmercury, Nalcor Energy began filling the Muskrat Falls reservoir this past August. Filling of the dam's reservoir converts mercury in the river bottom into toxic methylmercury, creating a serious threat to wild food supplies.

"We know that methylmercury poisoning will take away the hunting and fishing rights of indigenous communities downstream," says Gretchen Fitzgerald, National Program Director of Sierra Club Canada. "This is particularly egregious because mothers and children are especially at risk from the effects of eating food contaminated with methylmercury."

Yes, megadams cause mega damage, and so do the transmission corridors that bring the power they generate to the US. Right here in Maine, Central Maine Power's proposed New England Clean Energy Connect project (NECEC) (see article on this page) will have ecological and recreational impacts on 54-miles of pristine Maine woods. NECEC would transmit Hydro-Quebec power through 145-miles of Maine to its ultimate destination in Massachusetts.

"Every poll clearly shows that Mainers understand the impact of a transmission corridor through Western Maine and that they do not want our natural treasures damaged by it," says Joan Saxe, a leader on the Chapter's Climate Action Advisory Team. "And a growing number of towns that would be affected are rescinding their support or voting against the project."

Saxe also emphasizes that allowing electricity generated by Canadian megadams to flow through the state means Maine would be turning its back on the Indigenous communities who suffer the consequences of Canadian energy supplied to New England.

Environmental damage and the negative effects on Indigenous communities are not the only reasons that large-scale hydro is the wrong approach to addressing the climate crisis. Consider this: rivers take about 200 million tons of carbon out of the atmosphere every year. Dams impair the role of rivers to act as global carbon sinks by disrupting the transport of silt and nutrients. Additionally, hydropower reservoirs release significant amounts of methane. As a greenhouse gas, methane is much more potent than CO₂.

There is another factor to consider in regard to large-scale hydro. The billions of dollars spent on megadams and transmission corridors pulls away funds that could be used for nondestructive and much more effective energy solutions.

This is certainly the case for the CMP's billion dollar transmission corridor project. That money would be better invested in energy efficiency efforts and advancing solar and wind power.

"Maine needs to be a clean energy supplier, not the extension cord," emphasizes Chapter energy team leader Dot Kelly.

Be part of the Sierra Club efforts to address climate change with effective and nondisruptive solutions. To join one of our climate action teams contact the Chapter office at maine.chapter@sierraclub.org.



Megadam Opponents Rally in St. John

Sierra Club Maine's Joan Saxe (sixth from right) was among those participating in an anti-megadam rally and encampment in Saint John in early September. The annual Northeastern US Governors and Eastern Canadian Premiers Conference was scheduled to take place, but the conference was canceled due to weather issues. However, the rally went on, bringing together allies from the US and Canada (including the Sierra Club, Sierra Club Canada, Sierra Club Labrador, Elders of NunatuKavut, and Wa Ni Ska Tan (an alliance of hydro-impacted communities) fighting to stop megadams and transmission corridors.

Let's Demand a Full Environmental Impact Study on CMP's Transmission Corridor



Public comment periods on Central Maine Power Company's (CMP) transmission line project are closed for both the Land Use Planning Commission (LUPC) and the Maine Department of Environmental Protection (DEP). However, concerned Mainers can still have an impact on the project by contacting the Army Corps of Engineers and demanding

a full environmental impact study.

CMP needs approval from all three agencies in order to move ahead with its New England Clean Energy Connect (NECEC)—a project that would bring hydropower from Canada to Massachusetts through 145-miles of Western Maine. Included in those 145-miles would be a 54-mile corridor through pristine areas of the Maine Woods.

The Public Utilities Commission approved the NECEC project in early spring. However in September, the LUPC delayed its decision. The commissioners are scheduled to meet again in October.

The delay in the LUPC decision was caused by disagreement among the commissioners about the impact on one of the three areas of the proposed route of the corridor that need an exemption from the LUPC. The commissioners appeared ready to exempt two of those areas—the Kennebec River Gorge and the Appalachian Trail, but disagreed on the third area, Beattie Pond. However, since the September LUPC hearing, CMP has submitted a revised route that would avoid the Beattie Pond. The LUPC will review the revised route at its October meeting.

If the LUPC decides to grant CMP an exemption, the process will shift to the Department of Environmental Protection which is expected to make its decision on the project in late October or early November.

If the Commission concludes that the CMP project

is not an "allowed use" in all subdistricts or that not all applicable land use standards are met, the DEP would not be able to issue a permit and the project would not move forward.

Although Sierra Club opposes this project for a variety of environmental and social justice reasons, if the transmission line is to be built, consideration must be given to a fully-buried line, using railroad or highway right-of-ways. It is the applicant's responsibility to show buried line alternatives, as was done in Vermont and New York.

In the meantime, the Army Corps of Engineers needs to hear from concerned citizens that the people of Maine deserve a full study on the environmental impact of the CMP project. As noted in Sierra Club Maine's comments to the Corps:

"The National Environmental Policy Act directs federal agencies to complete an Environmental Impact Statement for projects that are significant in their scope and intensity, highly controversial, and that will affect endangered and threatened species. The CMP Transmission Project meets all of these elements." To read the complete comments from the chapter go to <https://www.sierraclub.org/maine/cmp-transmission-line>.

NECEC would affect the environmental and recreational quality of some of the most pristine areas of the Maine Woods. We need a detailed study from the federal government on what the impacts would be.

Please take the time to email Jay Clement at Jay.L.Clement@usace.army.mil. Let the Army Corps of Engineers know that Mainers deserve and demand a full study on the impact of a project that could severely damage our natural treasures.

The Chapter will also be involved in gathering signatures for a Citizens' initiative to stop NECEC. To find out about signing the petition and for other information regarding the citizens' initiative, go to <https://www.sierraclub.org/maine/cmp-transmission-line>.

Champion For a Consumer-Owned Power Company in Maine

Representative Seth Berry's proposal would replace both Central Maine Power and Emera.

At a Sierra Club sponsored early September gathering in Bath, State Representative Seth Berry (D-Bowdoinham) presented details of his proposal to establish a Maine Power Authority. The Authority would operate like other Maine public utilities such as Kennebunk Light and Power, Madison Electric Works, or Eastern Maine Electric Cooperative.

The new public utility would be solely responsible to its Maine customers—no investors first and customers second. It would also include access to lower-cost financing.

The Maine Legislature is expected to vote on Berry's proposal in March 2020. Sierra Club Maine has endorsed it.

The public-owned utility would replace both Emera and Central Maine Power Company (CMP).

CMP, owned by the Spanish company Iberdrola, has experienced significant problems with its billing and metering systems, customer service complaints,



Maine State Representative Seth Berry

"We Can Do Better."

reliability, affordability, and growing opposition from consumer and environmental groups in the last two years.

In recent years, CMP has focused on reducing compensation for owners of rooftop solar and on approval of a new transmission corridor to flow large-scale hydro power from Canada to Massachusetts, via the state of Maine.

"At present, Maine has the worst reliability and

some of the highest electrical delivery costs in the nation. CMP has for decades opposed measures to encourage rooftop solar and greater efficiency," Berry said.

Berry adds that in late 2018, CMP sent over 97,000 erroneous bills over a four-month period. It also failed to address a flaw in its new smart meters for over four years.

"We can do better," he said.

Berry explained that Maine Power, the new consumer-owned utility, would purchase the assets of CMP and Emera Maine without a penny in tax dollars. Consumer-owned utilities are cheaper because they borrow against future revenue, rather than having investors who require higher profits. "It's a lot like refinancing a home," said Berry. "By financing our grid at lower rates, Maine Power saves money now and in the future."

Berry is the House Chair of the Maine Legislature's Joint Standing Committee on Energy, Utilities and Technology, which works to improve Mainers' access to affordable, clean energy and high-speed internet. He's served a total of 12 years in the legislature and is a former House Majority Leader.

You can help make a public-owned utility a reality!

Contact your state legislators and urge them to support Representative Berry's proposal.

You Can Have an Impact as a Sierra Club Volunteer

Sierra Club Maine is a genuine grassroots organization, made up of committed volunteers working together for a common cause. We are always looking for new volunteers to join actively in our efforts to preserve, protect, and enjoy Maine's natural treasures. With just two staff members, volunteers create and carry out the Chapter's workplan with help from the Chapter director.

If you fear for your children or grandchildren's future, join Sierra Club Maine's efforts to keep our state and our planet livable for all.

We need volunteers in the following roles:

Communications

Are you a good communicator? Join our Communications Team and help us tell our story! We need volunteers to write letters to the editor, write testimonies for public hearings, write blog posts, and update and create content for social media.

Graphic Design

Got some design skills? Help us make fliers, posters, postcards, and programs for our events.

Outings

Is sharing the great outdoors with others your thing? Become an outings leader and plan day hikes, paddling adventures, or other activities. Help introduce others to what the Maine outdoors has to offer.



Graphic courtesy of EcoSuperior

Monitor executive and legislative activities in state

Political/Legislative

Monitor executive and legislative activities in state

government. Work with our Legislative Team to track legislation on climate change, renewable energy, environmental protections and more. This is a hands-on way to facilitate the change you want.

Fact Checking and Research

Are you a stickler for factual information and enjoy research? You can make sure our public information is factual and help us to respond to inaccurate beliefs and assumptions on issues like climate change and the benefits of renewable energy. Research information will be used in white papers, testimonials, and as talking points.

The Sierra Club is a great place to volunteer; the club offers opportunities to be a change-maker, to interact with other Sierra Club members and friends, and to enhance current skills and learn new ones. And volunteers have an important say in the direction of our organization.

Much of the work we do can be done from home or in Augusta, with occasional get-togethers in Portland or other parts of the state. Please consider joining with people who share beliefs in the need to protect what we hold dear. You can make a difference! If you'd like to join us, email us at maine.chapter@sierraclub.org.

MaineShare

Support Sierra Club Maine through payroll deduction

MaineShare gives you an easy way to support more than 40 organizations working to make Maine a better place to live.

Enroll your workplace for the current campaign online at www.mainshare.org or contact us directly.

P.O. BOX 2095, Augusta, ME 04338
Telephone: 207-622-1050
Email: giving@MaineShare.org



Donated Cars Benefit Sierra Club's Important Work

Your car donation to the Sierra Club Foundation will not only clear up space at your home, it will help support our work to protect the planet. Vehicle donations are a great way to add another tax deduction to your list.

Donate now by calling (844-674-3772) or visit <http://scfch.careasy.org/HOME.html> to fill out our secure online form. Our partners at CARS Inc. will handle the rest—including picking up your vehicle from any location, no matter its condition. CARS accepts trucks, trailers, boats, RVs, motorcycles, and more.

Upcoming Events



The Bethel Inn on a winter evening.

Sierra Club Maine Strategic Planning Retreat

December 6 — 8
The Bethel Inn, Bethel, Maine

Come for the day or spend the whole weekend.

Our strategic planning session will be on Saturday, December 7th. We are planning a weekend full of events with discount accommodations at the lovely Bethel Inn.

With critically important state and federal elections, as well as a citizen's initiative to stop the CMP transmission corridor, next year could well be a transitional year for action on climate and preserving our Maine environment. We'll also be gearing up for a busy legislative session and setting goals and actions for our dedicated volunteer teams.

Please join us and help us plan for an impactful 2020—the session is open to all Sierra Club members and volunteers.

The weekend won't be all work. We are also planning outings (hiking, cross-country skiing), great food, and plenty of time to socialize with fellow Maine Sierrans.

If you are on a tight budget and would like to spend the weekend with us, we'll have some sponsorship funds available to offset the costs for active volunteers.

We hope you can join us. You'll find it energizing, uplifting, informative, and fun.

To RSVP, go to our events page at sierraclub.org/maine/events.



FILMS

BROWN BAG LUNCH TALKS

BOOK CLUBS

RALLIES

& MORE

Check up on all
Sierra Club Maine
Events and Activities by
going to the events page at
sierraclub.org/maine/events

Maine Chapter of the Sierra Club

565 Congress St. Suite 206B, Portland, ME 04101

Telephone: 207-761-5616

web: sierraclub.org/maine

email: maine.chapter@sierraclub.org

EXECUTIVE COMMITTEE

John Brautigam	Falmouth	jblaw@maine.rr.com
Jonathan Fulford	Belfast	jonathan.fulford@gmail.com
Olin Jenner	Portland	olinjenner@gmail.com
Kelsey Halliday Johnson	Portland	kelseyhalliday@gmail.com
Dot Kelly	Phippsburg	dot@dkelly.org
Sue Levene (Interim Chair)	Phippsburg	suelevene@gmail.com
Zak Ringelstein	Yarmouth	ringelstein@gmail.com
Beverly Roxby	Belfast	beverlyteach@gmail.com
Kim Ervin Tucker	Lincolnville	k.ervintucker@gmail.com

CHAPTER DIRECTOR

Alice Elliott alice.elliott@sierraclub.org

COMMUNICATIONS ASSISTANT

Matt Cannon matthew.cannon@sierraclub.org

CHAPTER TREASURER

Denny Gallaudet denny.gallaudet@gmail.com

CLIMATE ACTION TEAMS

Joan Saxe joansaxe@gmail.com
Becky Bartovics bbartovics@gmail.com

ENERGY TEAM

Dot Kelly dot@dkelly.org
Denny Gallaudet denny.gallaudet@gmail.com

LEGISLATIVE TEAM

Olin Jenner olinjenner@gmail.com
Zak Ringelstein ringelstein@gmail.com

MAINE WOODS TEAM

Denny Gallaudet denny.gallaudet@gmail.com

NEWSLETTER

Jim Frick sierranjim@gmail.com

OUTINGS

Sue Levene suelevene@gmail.com

POLITICAL TEAM

Claudia King seekingcking@gmail.com

MAINE SIERRAN is published twice per year (March and September) by the Maine Chapter of the Sierra Club. Articles may be reprinted with credit to *MAINE SIERRAN*. We welcome your input. Please email Jim Frick at sierranjim@gmail.com if you have suggestions or comments or if you are interested in contributing articles or photographs.

Statement of Purpose of the Sierra Club

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

Visit Us On Facebook



<http://www.facebook.com/pages/sierra-club-maine/chapter/181279771922933>

Maine Students Demand Climate Action Now

September 20 climate strike brings out thousands from around the state and millions around the world.

It was the biggest climate demonstration ever—by most accounts, the biggest environmental demonstration in history. In every continent across the globe, an estimated four million students and supportive adults took to the streets to demand action on the climate crisis.

Students throughout Maine joined the worldwide strike on September 20. In Portland, some 2,000 students left school and gathered outside Portland City Hall carrying signs calling for climate action. The students came from a large number of Greater Portland schools as well as Bowdoin, Bates and other area colleges. They were joined by a large contingent of parents and concerned citizens.

“Climate change is the greatest threat facing humanity, period,” Bates College student Dianna Georges proclaimed to the crowd. “It will affect the lives of people from every part of the world—from every economic class and every ethnic group.”

Most speakers at the event stressed the need for immediate, bold action to reduce carbon emissions and to address the changes that are being brought about by warming temperatures and extreme weather events.

Student walkouts, demonstrations, and marches also took place in Bangor, Farmington, Belfast, Unity, Bar Harbor, Blue Hill, Machias, Norway, Camden, Brunswick, Dover-Foxcroft, Ellsworth, and Waterville.

The September strike was the latest expression in the fast-growing international youth movement addressing climate issues. It began more than a year ago when 15-year-old Stockholm student Greta Thunberg began skipping school every Friday in order to protest at the Swedish Parliament. Thunberg was soon joined by other students, and her action inspired school strikes in other cities—eventually sparking a worldwide youth movement demanding world political leaders to take bold action on reducing greenhouse gas emissions and on social justice issues.

As part of the September 20 strike, Thunberg led a massive student rally in New York City, where an estimated 250,000 students took part in a variety of climate events.

“It’s such a victory,” Thunberg told The Associated Press. “I would never have predicted or believed that this was going to happen, and so fast—only in 15 months.”

In the protests in Maine and around the world students emphasized the fact that they are ones who



Students from King Middle School march in Portland. They were among the estimated 2,000 students who took part in September 20 climate strike. (Photo by Gus Goodwin.)



Among the speakers at the Bangor climate rally were, left to right: Abby Cadorette, Melissa Tian, Ijeoma Obi, Revision Energy’s David Gibson, and Wells Mundell-Woods, who along with Obi organized the event.

will pay the highest price for inaction on the climate crisis, and that they are not going to stand by and let that happen.

Indeed, unless we act now to curb carbon emis-

sions, the young people have plenty of reason to be concerned, and to make demands on older generations who have not adequately addressed the problem. As noted in a statement from the National Resources Defense Council:

“They (the students) have good reason to strike. By the time today’s high school seniors turn 50, scientists predict that the average annual number of days in the United States on which the heat index exceeds 100 degrees Fahrenheit will have doubled. Worldwide, humanity will face more frequent devastating storms, year-round wildfire seasons, and rapidly rising sea levels that threaten to displace more than 800 million people....”

That’s if we don’t take bold action, and now. The youth of the world aren’t willing to accept anything less. They don’t deserve anything less.

Sierra Club Program Supports 100 Percent Clean Energy Schools

Powering schools with renewables is a climate solution that benefits kids and communities.



resiliency.

Schools represent a surprisingly large share of fossil fuel use. According to the U.S. Green Building Council’s Center for Green Schools, school districts manage two million acres of land and as much building space as half of the entire commercial office building sector.

Shifting American K-12 schools to 100 percent clean energy would reduce the same amount of climate pollution as taking one in every seven passenger cars off the road.

And school districts are a leading consumer of

Moving school districts to 100 percent clean energy is important to our kids and communities for many reasons, including: cutting climate pollution, saving districts money, creating STEM learning opportunities, and expanding community

electricity in many municipalities, spending \$8 billion each year on energy costs, school districts’ largest expense after personnel. We can help make schools, the heart of our communities, healthy spaces that help put in place the clean energy future our kids deserve.

State and local governments invest more capital in K-12 school facilities than in any other infrastructure sector outside of transportation. Let’s seize the opportunity to help steer these investments into schools that run on clean energy!

This is also a great opportunity for students to take real action on their climate concerns.

Right here in Maine we’ve seen students lead an effort to have solar energy installed in the Portland public schools. That effort recently received city council approval. Mount Desert Island also has approved solar installation for its high school. And there are proposals in other Maine school systems as well.

We urge Chapter members to take action to support your school district in committing to 100 percent clean energy.

The Sierra Club will help. We can work with you to advance your own local campaign and provide you with the following:

- 100 percent Clean Energy School Districts Toolkit. A comprehensive, user-friendly resource complete with templates and tools for advocates who want to move your school district to make a 100 percent clean energy commitment.

- 100 percent Clean Energy School District Handbook. A guide for school district staff detailing the pathways to achieve 100 percent clean energy.

- A learning network of parents and others moving school districts to 100 percent clean energy around the country.

- Staff support and partnership in launching and implementing your campaign.

To receive these materials and get direct guidance and support for making your schools green reach out to Sierra Club Maine Climate/Parents Volunteer, Andy Burt at annedburt145@gmail.com.