

Want to thwart climate change? Here are 8 steps you can take

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Now that the New Year's Eve party is over, it's time to lay off the balloons and glitter – both are scourges to the environment.

UConn faculty members make the case for those and other personal lifestyle changes that can help protect the environment for future generations.

Skip the balloons, and glitter, and coffee cups, and plastic bags ...

Plastics in the environment are bad news. Besides leading to immense gyres of plastics in the ocean, plastics in the environment break down into microplastics, says Michael Willig, professor of ecology and evolutionary biology and director of UConn's Center for Environmental Sciences and Engineering. "Broken down by UV radiation abrasion during transport," he says, "these plastics are transformed into microplastics that range in size from the barely visible (a few millimeters) to the invisible (within the range of nanoparticles)."

Microplastics obstruct digestive tracts of animals. And, Willig, says animals can also absorb and concentrate other chemical contaminants such as heavy metals and pesticides, potentially magnifying exposure to these contaminants to species further up the food chain, potentially with significant effects on humans and top predators.

Considering estimates that put actual recycling rates below 10 percent, it's clear that using plastic and then recycling it is not a viable option. Therefore, the best thing you can do is to stop or reduce your plastic consumption in the first place.

Reduce Seasonal Sodium

We also need to ensure we are protecting our [water resources](#) from [road salt](#), says Michael Dietz, extension educator and director of the Connecticut Institute of Water Resources, who studies the health of

groundwater.

"The over application of deicing salts is a big problem and we need to do something to address it," says Dietz, adding that, while it needs to be applied for safety, it is all too easy to go overboard.

Too much salt is very bad news for soils and water supplies, because once salt makes its way into the environment, there is no way to get it out. Another important concern is what salts can do once they are in the environment, as new studies are showing that salinization can lead to other elements mobilizing, such as radium and other heavy metals.

Turn Down the Heat

In the winter months, levels of particulate matter in the air increase as heating oil and biomass is burned.

Although we can't control emissions from elsewhere that makes local air less than desirable, we each can make changes to improve our air right at home, namely being mindful of our consumption, says Kristina Wagstrom, assistant professor of chemical and biomolecular engineering.

"Use only what you need," she says. Since much of what we consume on a day-to-day basis relies on combustion in one form or another, being conscious consumers is important. Reduce your water usage, turn thermostats down, and try to get around in ways that produce little or no emissions.

In the warmer months, ozone becomes a problem, so much so that Connecticut now has a designated Ozone Season. Being downwind of the rest of the country, as well as sandwiched between the urban centers of the east coast, air quality can be a challenge throughout the year, says

Wagstrom.

"We're definitely not in an area with the best air quality," she adds, "and there are quite a few health issues that can be linked to poor air quality."

Get Lazy with Lawn Care

Each summer, a dead zone forms in Long Island Sound. A dead zone forms from an influx of nutrients, which leads to an increase in algal growth, called a bloom, says Ashley Helton, assistant professor of natural resources and the environment. The booming algae population grows and eventually begins to die, and the microorganisms that break down the algae consume all of the oxygen in the water as they degrade the algal biomass. Animals cannot live in a zone of oxygen depletion.

"Here in Connecticut, we have a very densely populated coast and we produce a lot of waste," says Helton, noting that the dead zone in Long Island Sound is primarily caused by human waste and lawn fertilizers.

While we can't individually control the output from [wastewater treatment plants](#), we can control what we do to our lawns. Considering that nearly 10 percent of the state is covered with turf, it is easy to see how lawn fertilizers can have an impact.

Opting for a less manicured lawn will not only save time, it will save water, reduce fertilizer run-off, and you may also attract more beneficial insects.

Plant Natives – They Make Good Neighbors

Native birds and animals eat native insects that eat [native plants](#). Without native plants, the food web suffers, says ecology and evolutionary

biology professor David Wagner. Insect larvae, such as caterpillars, he says, are "the hamburger meat of the food web."

"If you plant a non-native tree, a ginkgo for example, no creatures in Connecticut will benefit," he says. "Instead, you could plant something like a white oak that will support thousands of native species. Think of growing native plants as helping to grow baby birds and supporting biodiversity."

"One yard at a time, one tree at a time, one campus at a time," Wagner adds, "we need to be more mindful about the decisions we make."

Protect Green Space

More than just a pretty view, green space and other natural landscapes also provide us with valuable ecosystem services. From cleaning our air to providing us with clean water, we rely on the landscape in ways we have yet to fully realize.

Extension educator Chester Arnold says it is vital that we manage and preserve our open spaces. "It isn't something we can go back and fix later on," he says.

To help ensure that our land is used wisely, he suggests, get involved in local planning and zoning commissions, educate yourself and others about land use concerns, and support land trusts.

Express Yourself

One of the most important things the public can do is be involved politically, says Rebecca Boehm, former UConn postdoctoral research associate and currently an economist for the Union of Concerned Scientists.

"Be engaged in policy-making at any level," she advocates.

"Environmental protection and climate policies matter to address issues even at the local level."

It's important to be aware of what is going on and call your members of congress, she says. No matter how small those measures can seem, they do matter.

Boehm says researchers, non-governmental organizations, and the public need to work together to advocate for the big changes the world needs. So contact your leaders, voice your concerns, and advocate for the changes you want to see.

Don't Wait to Start!

While it can be overwhelming to think about, the truth is we can all make a difference by changing some of our daily habits – and these changes need to start now.

"It's really frustrating and it's really hard, but we have to change the way we think about things," says assistant professor-in-residence Eleanor Ouimet, an environmental anthropologist who studies human-environment interactions.

Although humans don't respond well to guilt, and many can just shut down when faced with such a huge task, it's important not to give up, Ouimet says. She recommends starting small, and as you adapt and adjust, adding more habit changes: "Lead by example, it's contagious."

Remember, [climate change is happening even in our own backyard.](#)

Provided by University of Connecticut

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