More heat, storms, droughts

Peering into the future of local climate change

Spring arrives earlier, summers are hotter, and winters are warmer with less snow. That might sound good, but there is trouble brewing as we change — disrupt — the Earth's climate. Climate affects everything in our lives from food production to health to water.

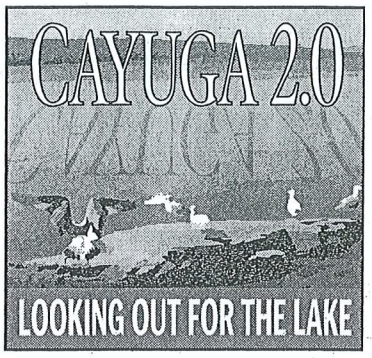
Most scientists agree that excessive greenhouse gases, such as carbon dioxide and methane, are changing the climate — and not necessarily for the better. In the Finger Lakes region, expect more extreme weather — record highs and lows, short-term droughts punctuated by rain bursts.

SHARON ANDERSON
Guest Viewpoint

Since 1900, average upstate New York temperatures have crept up 1.5 degrees Fahrenheit. Precipitation trends show a 20 percent increase in precipitation with more of the precipitation arriving during extreme events, defined as more than two inches of rain within 48 hours.

By 2050, summer heat in New York could be similar to what Virginia currently experiences — and that's the best-case scenario. Without drastic reductions in heat trapping gases, upstate summer heat could be like Georgia. As the air temperature warms, more water evaporates and is held in the atmosphere. This increase in atmospheric moisture causes the heavier downpours. Between downpours, expect short-term (one- to three-month) droughts.

The parched periods could deplete water supplies, constrain irrigation and stress fish and aquatic wildlife. Typically higher summer temperatures and dry spells increase the demand for water — for farming, lawns and gardens, pools and sprinklers, and fighting fires.



ABOUT THIS SERIES

Cayuga 2.0 is a series of monthly guest viewpoints about the health of the Cayuga Lake watershed and the challenges and opportunities related to it. The viewpoints are provided by the Tompkins County Water Resources Council.

While the Finger Lakes region may continue to get slightly more annual precipitation, the greater portion will fall in the winter with less water in the summer growing season when it is most needed. The snow that falls will melt more quickly with an earlier final spring thaw causing higher stream flows in the late winter and spring. In summer and autumn, between storms, stream flow would be less, as well as warmer, which stresses many of the fish prized by anglers such as trout and salmon. Short, intense summer rains tend to exceed the soil's capacity to absorb the water, resulting in runoff that can cause flooding, erosion and the transport of pollution. Increased flooding would put streamside homes and structures at risk. The rapid runoff means less rain will seep into the ground where it can nourish plants and replenish water supplies.

We can use existing and emerging technology to reduce greenhouse gases and carbon and reduce the magnitude of climate disruption. The choices we make now will affect future generations.

The best place to start is by conserving energy, which can also save cash and keep money in our local economy.

Transportation uses a lot of energy and releases a lot of carbon. Reduce your dependence on a car even if only once a week. Rideshare, take a bus, walk, bike or just skip taking a trip. Be more fuel efficient by keeping the car tires inflated and driving the speed limit or less.

Homes are another place where lots of energy is used. Cooperative Extension of Tompkins County offers information and workshops on saving money and energy in the home. Visit www.ccetompkins.org/energy for tips and workshops.

Personal choices alone are not enough. We also need larger-scale efforts.

Urge the municipality you live in to use more renewable energy. The new Caroline Town Hall is a great example. Support more local production of renewable energy such as wind-generated electricity and use of wood and grasses as a fuel source.

Learn about the proposed New York state legislation, bill S7683, that allows property owners to finance energy efficiency work through loans that stay with the property. Energy efficiency improvements pay for themselves long term by reducing energy costs.

Property Assessed Clean Energy (PACE) is a local government program that helps property owners overcome the hurdles of high upfront costs and the long return on investment. Low-interest financing is paid back through an assessment on the property tax. The loan is automatically transferred to the new owner if the building is sold, reducing the financial risk. Visit ccetompkins.org to learn more about PACE and the pending legislation.

Sharon Anderson is a member of the Tompkins County Water Resources Council and is environment program leader for Cooperative Extension of Tompkins County.

File Photo

Fishing in spots like Salmon Creek in Ludlowville could be affected by warmer winters and summers in the future.

Saturday, June 5, 2010