

YOUR TURN

Weather extremes may be New Jersey's new normal

In case you didn't notice, New Jersey's weather in the last couple of months has been upside down. Most of February was weirdly spring-like, in fact, the warmest February on record in the state, while March behaved more like a typical February.

Get used to it. Greater variability in weather may be the most immediate impact of climate change on New Jersey, according to State Climatologist David Robinson.

Robinson, the keynote speaker at the 21st annual New Jersey Land Conservation Rally on March 17, said there have been "a lot more extremes" in weather during the last few decades as a result of human impacts on the climate.

"A preponderance of evidence suggests that climate change is occurring and humans are responsible for significant portions of recent changes," he said.

At a time when climate change is being questioned by our national political leadership, how is Robinson so sure that human action is the cause? He firmly believes that scientific theory, observations and models together add up to solid evidence.

Robinson, who is a geology professor at Rutgers University, relies on observations in his work. His specialty is tracking global snow cover, a key indicator of the warming of Earth's atmosphere.

"In the spring, each successive decade the snow is melting earlier," he said, adding that the polar ice sheet is shrinking at "rates I never thought I would see in my lifetime."

At the same time, he noted, carbon dioxide in the atmosphere "has risen precipitously in the last 50 years." Carbon dioxide is mainly created by the burning of fossil fuels like oil and gas.

Carbon dioxide and other "greenhouse gases" in the atmosphere act like a thermal blanket, trapping heat.

"Physics tells us that this greenhouse gas science works," Robinson said.

Scientific theory and more than a century of weather observations are used to create computer models to predict future trends like rising temperatures, more precipitation, increased weather variability and higher sea levels.

In addition to weather variability, said Robinson, climate change in New Jersey may mean hotter, drier summers; warmer, wetter winters; and more floods from too much rain falling at once.

Another major impact is rising sea levels that could inundate the state's coastal barrier islands in the next 100 years.

What can be done about climate change?

In a sense, said Robinson, there is no stopping it: "The train has left the station - we are not going back." It would take centuries to fully reverse the impacts.

But that does not mean people should give up hope. "We can slow the train," he assured land conservation rally attendees.

Four steps, he said, are needed to fight climate change:

- Knowledge - Developing a better understanding of the details and complexities of climate change;
- Mitigation - Taking actions like reducing carbon emissions and increasing sources of clean energy;
- Adaptation - Building

communities that are more resilient to weather extremes and, where needed, moving people away from flood-prone and coastal areas;

- Leadership - Raising awareness of the challenges ahead.

New Jersey's land conservation community can play an important role, said Robinson, by preserving and restoring as much of the state's natural environment as possible.

Trees and plants remove carbon from the atmosphere and emit oxygen, while preserved lands soak up rainwater and prevent flooding.

Individuals can help by conserving energy, writing to their elected representatives and voting, and joining organizations that are taking action for the climate.

Take action for the climate - and this state we're in! Tell your representative in Congress that research and action to address climate change and advance energy conservation are important to you.

Closer to home, educate yourself about the candidates in this year's New Jersey gubernatorial and legislative elections and vote for those who will protect the state's environment and natural resources. Reduce your own "carbon footprint" by saving energy wherever possible.

Michele S. Byers is the executive director of the New Jersey Conservation Foundation, Far Hills. She may be reached at info@njconservation.org

GUEST COLUMN**MICHELE S. BYERS**

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