



# Experts Available to Comment on Climate Change and Urgency of Environmental Concerns

Monday, March 20, 2023



DURHAM, N.H.—

Researchers at the University of New Hampshire are available to offer insight

around climate change issues

like warmer winters, ‘weather

whiplash’, sea-level rise and the future of winter. At the forefront of

climate change research, the scientists can offer insight into

everything from the impact on ecosystems to the importance of

reduced emissions and increased carbon storage. The

researchers study a wide range of issues from disappearing

snowfall to increased coastal flooding.

## Disappearing winters

### Warmer winters and longer springs

Alexandra Contosta, research assistant professor



**MEDIA RELATIONS**

## LATEST NEWS

**UNH Announces 2023 Granite State Award and Honorary Degree Recipients**

April 28, 2023

**UNH Announces Annual Poetry Festival & Programming**

April 28, 2023

**Shoals Marine Laboratory Offers Mom an Island Garden Adventure**

April 18, 2023

**Media Availability: British Historian to Comment on Coronation of King Charles III**

April 6, 2023

[Alix.Contosta@unh.edu](mailto:Alix.Contosta@unh.edu); (603) 862-4204

As the Earth continues to warm, climate change is being targeted as causing a lot of environmental challenges including a shift in the seasons—shorter, less cold and snowy winters and longer, drier springs—as well as an increase in ‘weather whiplash’—unexpected harsh storms followed by unusually warm weather. All can have adverse consequences on ecosystems and human communities. Contosta’s work examines the lasting impact of these abrupt swings in weather conditions and how understanding them can help decision makers, managers and environmental planners adapt to potential ecological, social and economic consequences. Her focus is on the [effect of longer springs](#) (lengthening vernal window), the delicate balance between land use, [carbon storage](#) and climate, and that it’s not too late to [slow some of the warming by reducing emissions](#). Contosta can talk about the impact of seasonal freezing and thawing on the environment, the consequences of no snow winters on recreation and vital New England industries and how individuals can make a difference.

### **Future of winter: Impact of no snow winters on New England**

Elizabeth Burakowski, research assistant professor

[elizabeth.burakowski@unh.edu](mailto:elizabeth.burakowski@unh.edu); (603) 862-1796

Winters are warming faster than summers in North America, impacting everything from ecosystems to the economy. Global climate models indicate that this trend will continue in future winters. Burakowski, co-author of the 2021 N.H. Climate Assessment Report, was raised on the local ski hills of New England and says that winters are vital to everyone and serious action is needed now to slow the warming to preserve the purpose of cold weather and snow which includes protecting woodland animals, preventing the spread of invasive forest pests and increasing the ability of ski resorts to make snow—protecting the

### **NH Research Finds Affordability and Lack of Openings Obstacles to Child Care**

March 28, 2023

[VIEW ALL](#) 

 [SUBSCRIBE TO UNH TODAY](#)

region's multimillion-dollar recreation industry. Burakowski's research focuses on better understanding how changes in land cover (i.e. deforestation) affect surface temperature, energy and [water, like rivers](#). She has an interest in studying the impact of [reduced emissions on reducing warming](#) and has several projects that focus on how less winter snow adversely affects the New England ski industry. Burakowski is one of the mothers sharing her insight in a new climate-focused book being released spring 2023; [Love Your Mother: 50 States, 50 Stories and 50 Women United for Climate Justice](#).

## **Flooding**

### **Coastal flooding, road resilience and potholes**

Jo Sias, professor of civil and environmental engineering  
[Jo.Sias@unh.edu](mailto:Jo.Sias@unh.edu); (603) 862-3277

New England roadways are becoming more vulnerable due to increasingly wetter winters, hot summers, intense tropical storms, steady sea level rise and increased flooding, all causing roads to take a beating resulting in endless wear and tear. UNH has been leading the research on climate change impacts to roadways, including Sias's latest [research project funded by NOAA to study how and why climate change hazards, like high temperatures and excessive flooding, are causing roads to crumble and crack](#) and looking for ways to protect them. The focus of the project is to understand the combined hazards of flooding from above and below the road. The goal is to create high-resolution models to study the effects of sea level rise on roadways as well as develop a toolkit to help assess the effectiveness of alternatives. Sias can comment on the effect of climate change, flooding and sea level rise on infrastructure and roadways, like erosion, potholes and even softening asphalt from record high temperatures.

### **Infrastructure and sea level rise**

Jennifer Jacobs, professor of civil and environmental engineering  
[jennifer.jacobs@unh.edu](mailto:jennifer.jacobs@unh.edu)

Jennifer Jacobs is a leading expert on the effect of climate change on infrastructure and transportation and can talk about related issues that are threatening the country's roads—including sea level rise, coastal flooding, extreme heat, snow and wildfires. Jacobs was the lead author of the transportation chapter for the fourth National Climate Assessment (NCA4) that offered insight into the challenges of climate change on U.S. infrastructure—the backbone of economic activity—to perform reliably, safely and efficiently. Jacobs [also researches the effects of snowmelt and the costly consequences it could have on infrastructure](#). Her recent research found future snowmelt incidences could vary greatly by the late 21st century—decreasing over the continental U.S. and southern Canada but increasing in Alaska and northern Canada resulting in larger flooding vulnerabilities and possibly causing major societal and economic consequences including costly infrastructure failures.

### **General climate change**

#### **Climate change and weather**

Mary Stampone, associate professor of Geography  
[Mary.Stampone@unh.edu](mailto:Mary.Stampone@unh.edu); (603) 862-3136

Stampone's research interests include climate system monitoring and applied climate science with a focus on regional climate variability and change. As the New Hampshire State Climatologist, Stampone also provides New Hampshire citizens, educators and agencies with weather and climate information in support of environmental management and planning activities. She is a co-author of the [2021 N.H. Climate Assessment Report](#).

#### **Climate change: Preparedness for sea level rise and flooding**

Cameron Wake, research professor in climatology and glaciology

[Cameron.wake@unh.edu](mailto:Cameron.wake@unh.edu)

Wake is a co-author of the [2021 N.H. Climate Assessment Report](#) that says by the year 2100 most of New Hampshire is expected to have 50 to 60 days a year above 90°F unless steps are taken to lower emissions. Wake leads a research program investigating climate and environmental change through the analysis of ice cores, instrumental data, and phenological records, with a focus on the northeast United States, the Arctic, and central Asia. His collaborative research on regional climate assessments, such as flooding, in the northeast United States has been shared with state and federal agencies and covered widely in the media.

The [University of New Hampshire](#) inspires innovation and transforms lives in our state, nation and world. More than 16,000 students from all 50 states and 71 countries engage with an award-winning faculty in top-ranked programs in business, engineering, law, health and human services, liberal arts and the sciences across more than 200 programs of study. A Carnegie Classification R1 institution, UNH partners with NASA, NOAA, NSF and NIH, and received \$260 million in competitive external funding in FY21 to further explore and define the frontiers of land, sea and space.

## Media Contact

[Robbin Ray '82](#) | Communications and Public Affairs |  
[robbin.ray@unh.edu](mailto:robbin.ray@unh.edu) | 603-862-4864



**University of New Hampshire**

UNH Today is produced for the UNH community and for friends of UNH.

The stories are written by the staff of [UNH Marketing](#).



UNH Today • UNH Main Directory: 603-862-1234  
Copyright © 2023 • TTY Users: 7-1-1 or 800-735-2964 (Relay NH)

[USNH Privacy Policies](#) • [USNH Terms of Use](#) •

Email us: [unhtoday.editor@unh.edu](mailto:unhtoday.editor@unh.edu).

[ADA Acknowledgement](#)

[MANAGE YOUR SUBSCRIPTION](#)  [CONTACT](#)

[US](#)