










Vermont's Climate Report Card is Out



Science informs our legislative testimonies, our project priorities, and even how we manage our fifty-eight natural areas. By partnering with the Gund Institute at UVM to fund and collaborate on research, we expand our science capacity to better plan for a changing climate future.

This winter The Nature Conservancy was a strategic partner on the most comprehensive study of climate change in Vermont, UVM's **Vermont Climate Assessment 2021**. The big takeaway: Vermont's average annual temperature has warmed by nearly 2°F, and precipitation has increased by a whopping 21%, since 1900.

Many of the characteristics of Vermont life that we hold dear are being impacted by climate change, from farming and maple syrup to long winters and skiing. Below are some of the key findings of the study (more results are available at vtclimate.org).

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|  <p>Temperature: Average temps have increased by nearly 2°F since 1900. Winter temps have increased 2.5x faster than average annual temps since 1960. VT's freeze-free period has lengthened by 3 weeks since 1960. On average, lakes and ponds are thawing 1-3 days earlier per decade.</p> |  <p>Recreation: The ski season will be shortened by 1 month (under a high emissions scenario) or by two weeks (under a low emissions scenario) by 2080. With snowmaking, the downhill skiing sector can likely remain viable in VT until approximately 2050.</p> |
|  <p>Precipitation: Precipitation has increased 21% since 1900. We now experience 2.4 more days of heavy rain than in the 1960s. With flooding expected to increase, better stormwater planning is required to reduce damage to homes, roads, and farms.</p> |  <p>Health: Greater risks of heat exposure, water quality issues, diseases from ticks and mosquitoes, and natural disasters. These have varying impacts, highlighting the unequal burden for populations such as 65+ or marginalized communities.</p> |
|  <p>Droughts: Floods and droughts are now VT's most likely natural disasters. Both are expected to increase due to growing variability of rain and changing water tables.</p> |  <p>Agriculture: Rising temps and longer growing periods may make some new crops feasible. However, increasing rain and variability will complicate conditions for crops like apples and maple syrup.</p> |
|  <p>Wildlife: Roughly 70 bird species are expected to disappear from VT in the next 25 years due to climate change, including the common loon and hermit thrush. Moose numbers are projected to decline, and white-tailed deer populations are expected to increase.</p> |  <p>Tourism: Our warming climate will remain attractive compared to other regions. Expect an increase in "seasonal climate refugees" as rising temperatures attract visitors looking to escape extreme heat.</p> |
|  <p>Forests and Lakes: Climate change is making conditions less favorable for several tree species—including the iconic sugar maple—and exacerbating threats to forests. Warming waters will experience increased risk of harmful algal blooms and reduced biodiversity.</p> | <p>We are committed to taking climate action by: Supporting policies that lower greenhouse gas emissions, conserving and restoring climate resilient lands as a safe harbor for nature and people, and applying nature-based climate solutions that can deliver up to a third of the carbon emission reductions needed by 2030, to keep global temperature increases under 2°C.</p> |



The Living Lab at Hubbardton: Managing Lands in a Changing Climate

It is easy to drive right past our Hubbardton River Clayplain Natural Area along Route 22A without ever suspecting that this retired ag field is the setting for an ambitious restoration project grappling with how to address our 21st century environmental problems—climate change and accelerating biodiversity loss.

Once the dominant forest of the Champlain Valley, the clayplain forest is now one of the most compromised. We are working with partners to bring back this forest, restore significantly degraded streams on the parcel, and enhance a critical climate corridor for wildlife to move between the Adirondacks, Green Mountains, and beyond.

At this one site, we are creating a living lab of sorts, deploying both proven and new practices to bring it back to life and safeguard nature into the future. The suite of tactics is extensive: seed collection and hydro-seeding with more than a dozen native trees and shrubs, invasive species management, wood additions in streams, support reptile underpasses—all in hopes of improving water quality and habitat, while piloting techniques that can be applied to restoration efforts across our region.

Grappling with how best to steward our lands and waters for an uncertain climate future is more than an intellectual exercise, it is a critical action to help curb biodiversity loss while allowing nature to thrive. In fact, a team of TNC scientists, including Vermont's own senior conservation planner, Gus Goodwin, worked together to create shared guidance on how best to manage our lands for this change.



"TNC has developed groundbreaking science to identify lands to sustain biodiversity in a changing climate. It was really rewarding to be part of a team that worked with TNC scientists and land managers to align decades of land management experience with this bold vision for climate resilience."

— **Gus Goodwin**, Senior Conservation Planner

The initiatives at Hubbardton River Clayplain will become the living example for this important climate resilience work in Vermont. The future of nature depends on it.

If you would like to learn more about the specific initiatives, visit Hubbardton Natural Area, or support our climate resilience work, please contact Tom Rogers at tom.rogers@tnc.org

Conservation is climate action. Please consider supporting our work.