

# Warming Winters and the Economy: How philanthropy can help Vermont adapt

## THE TAKEAWAY

Climate change could have big implications for the Vermont economy. Charitable individuals can help the state adapt by supporting:

- A broad mix of businesses and amenities in resort towns
- Job training and four-season recreation
- Climate research and energy sector innovation



**BLANKETS OF SNOW** fell across Vermont in a series of late January storms that left many residents pulling out shovels and skis. Finally, it seemed, real winter was arriving after a January thaw that went on for weeks rather than days.

Winter is not what it used to be in Vermont, despite the occasional Arctic blast or blizzard. Average yearly temperatures are increasing, and the trend is more pronounced in the winter, according to a 2021 University of Vermont (UVM) study. With fewer below-freezing days, and more precipitation, many sectors of the economy from farming to maple sugaring to apple growing could be affected. Winter tourism also could look very different in the future.

The Vermont Climate Assessment Study at UVM predicted that the Vermont ski season will shrink at least two weeks and possibly a full month by 2080, even with the heavy investment ski areas have made in snowmaking. Climate change could limit other winter recreation sooner because snowmaking

can't be used as effectively, or at all. Think Nordic skiing, snowmobiling, ice fishing, and pond hockey tourneys.

Nor is the UVM study the only source weighing in about winter melt. Last year, an analysis by national nonprofit Climate Central suggested that Burlington has experienced more winter warming since 1970 than any of the 238 U.S. cities studied.

Recognition is growing that in addition to taking steps to reduce climate change, Vermont needs to do what it can to mitigate the impacts of warming winters on the economy. This is no small challenge in a state where snowdrifts help support millions in tourism spending and "Let It Snow" is an unofficial anthem.

But the challenge should not be ignored. Arne Bomblies, a snow researcher and associate professor of civil and environmental engineering at UVM, observes that with the rising frequency of winter



*Charitable individuals can help by supporting:*

### **A broad mix of businesses and amenities**

Tourism in Vermont generates \$3 billion annually, with a big chunk of that money coming in winter. Vermont saw 3.9 million skier visits last winter as the industry recovered from COVID-19 restrictions and moved closer to the pre-pandemic level of 4.2 million visits in 2019. Spending goes well beyond lift tickets and ski area passes, said Molly Maher, president of the Vermont Ski Areas Association.

Visitors also spend on lodging, dining, shopping, and equipment rentals. "Ski areas bring millions of dollars of direct spending into the state every year and that doesn't just happen at ski areas," Maher said. "About three quarters of that happens in the communities around the ski areas."

With the assistance of snowmaking, many Vermont ski areas are still able to average 130 operating days a year, Maher said. "We're not seeing a downward trajectory of operating days getting smaller, and smaller, and smaller," she said. But thaws

and wind events are increasingly a challenge. "It's more of roller coaster, and more erratic weather," Maher said.

Many ski areas have already invested in activities to supplement skiing and riding, including golfing and mountain biking in the summer, as well as climbing walls, aquatic centers and four-season event spaces for weddings and conferences.

More diversification is needed to help communities balance out economies that still rely heavily on snow-dependent tourism. Philanthropy can help by supporting entrepreneurs with grants and start-up funds and by partnering with state programs such as the Working Lands Enterprise Initiative. This effort has helped maple syrup producers expand

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thaws, Vermont's snowpack and snow recreation scene could change significantly in decades ahead. "The thaw events that have always happened here in Vermont seem to be getting a little more frequent and possibly a little more pronounced," Bomblies said.

We can't forecast the future of winter with complete certainty. But Vermont should be working to adapt to negative impacts of warming, and take advantage of potentially positive ones, such as a longer growing season that could support new crops and bigger harvests. It's especially important that this effort focuses on rural parts of the state, where income and education levels are significantly lower than in job centers such as Chittenden County.

sugarhouses, and helped loggers buy equipment to expand firewood processing capacity. It has funded winter flower growing operations that supply local weddings and supported solar panel installations at farms.

Adapting to warming and climate change is about creating a range of economic opportunities, said Ellen Kahler, executive director of the Vermont Sustainable Jobs Fund. She is also the 2015 winner of the Vermont Community Foundation's Con Hogan Award for Creative, Entrepreneurial, Community Leadership.

"I think it's figuring out how to diversify," Kahler said, and asking: "What else could be done besides just tourism in your town?"

This could mean deliberately encouraging growth in the agricultural sector near a resort area by allowing more on-farm accessory businesses, for example. Kahler said that there can be "pushback" when a farmer wants to host weddings, or a logger wants to expand an existing operation. Some homeowners don't want to hear chain saws or big trucks, and town leaders that approve luxury lot subdivisions are sometimes resistant to zoning changes that would allow small businesses to grow and diversify Vermont's rural economy.

Affordable housing construction is another issue. It's desperately needed across the state and especially in resort towns.

"If they are resort towns, their property values are through the roof," Kahler said. Solving the problem may mean collaborations between towns around a ski area, as well as zoning changes. It's also important to build community, because that creates connections that foster economic vitality and general wellbeing.

"From a rural community perspective, I really do think that if there's one thing that all the towns in Vermont could be doing a better job of, it is the intentional building of community, where we look out for each other," Kahler said. The Vermont Community Foundation Spark Connecting Community Grants program have helped do this, added Kahler.

Spark brings people together by funding a range of activities, from family wellness events to community gardens, book clubs and artist salons that support work by creators of color. Building community also means welcoming people of all races and backgrounds. One way for towns to show that commitment is by signing the [Vermont Declaration of Inclusion](#), Kahler said.

**"I think it's figuring out how to diversify and asking what else beyond tourism can be done in your town."**

### **Job training and four-season recreation**

Workforce development is also key to help Vermont communities stay resilient and support not just winter tourism, but opportunities to attract visitors year-round, said Heather Pelham, commissioner of the Vermont Department of Tourism and Marketing. Tourist spending and visits are bouncing back from the impacts of the pandemic, but total employment in the tourism sector is still about 16 percent lower than pre-pandemic levels. Many jobs are going unfilled, Pelham said.

Philanthropy that supports scholarships, apprenticeships, and degrees that align with jobs in the hospitality and tourism sector could help build a stronger workforce and steadier economy in resort areas, Pelham said.

Winter tourism doesn't just mean jobs loading ski lifts, and programs that emphasize the potential for solid career growth are needed, Pelham added. "A ski area is like any other large business. You can be in marketing, accounting," Pelham said. "You're going to have supervisors and managers and upper-level managers as in any large company."

Training and education to help support four-season outdoor recreation is also important, she added. "If we want to keep building trails, we need to train people who know how to make trails," Pelham said.

Winter tourism accounts for about 36 percent of tourism spending in Vermont—putting it behind summer (48 percent) and ahead of fall (16 percent).



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Each season is important, Pelham said, and whatever changes may be ahead for winter, it's important to support a range of activities and attractions for visitors over the course of the seasons. Philanthropy that partners with state efforts such as the Vermont Outdoor Recreation Economic Collaborative Community Grant Program can help towns do visioning about what they want, and expand funding for bike trails, wayfinding signs, trailhead parking, and local four-season marketing campaigns.

“I would say that having a very diverse set of options for folks is always going to be to the state's benefit,” Pelham said. “And it doesn't have to be one-size fits all.”

So, while major ski areas are often a big draw, they don't have to be the only draw. Philanthropic support can help small nonprofit ski hills such as Cochran's in Richmond and Northeast Slopes in Corinth, or organizations such as Rutland-based Come Alive Outside. It sponsors a range of year-round events that appeal to both tourists and locals. Whether it's a “human foosball” competition, cardboard sledding excursion, or a Star Wars costume hike, the goal is to help people of all backgrounds enjoy the outdoors, said Haley Rice, marketing and program manager.

Snow isn't required for most of Come Alive Outside's events. But winter tourism has a long history in Rutland with its proximity to ski areas such as Killington, and climate change is a real worry. “I think lot of people are concerned,” Rice said. “How are we going to keep our economy rolling when so much of it is dependent on the weather in the winter.”

## Research and innovation

Philanthropy can also help by supporting academic research to study climate change in Vermont and help apply that knowledge to plan for the future. At the University of Vermont, Bomblies is part of a team studying snowpack. With sensors and drones set up at two dozen sites across the state, the team is gathering data on how weather, elevation, and forest density affect snowmelt. The project could help inform many responses to climate change, from road design to flooding mitigation to economic modeling on the future of snow sports.

“The goal is to have this be a key piece of snow sensing infrastructure in the state,” Bomblies said.

Along with research at academic institutions, philanthropy can support innovations in the business sector that help reduce carbon emissions

and create green jobs that support the state economy year-round. The DeltaClimeVT business accelerator program has helped seed start-ups and pilot programs. One example: A rooftop wind turbine designed to work in compact spaces. The ARC Industries ORB turbine is now being piloted at the Burlington International Airport in partnership with the Burlington Electric Department.

It's an exciting project, especially as it relates to the broad goals Vermont should be working towards, said Kahler, at the Vermont Sustainable Jobs Fund, which manages DeltaClimeVT.

“Everything that we're doing should be climate-smart, climate-friendly, and climate-improving.”



## Deeper reading

[Winter Warming](#)

[Vermont Climate Assessment](#)

For additional recommendations about giving in Vermont, reach out to the Vermont Community Foundation philanthropy team at [philanthropy@vermontcf.org](mailto:philanthropy@vermontcf.org) or (802) 388-3355 opt. 5 to be connected with staff who can help.

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