

Testimony to House Environment & Energy

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Good morning, Chair Sheldon, and members of the Committee. Thank you for inviting me in to speak about Vermont's flooding problem, especially in consideration of the historic flooding events that took place this summer. I am Lauren Oates, Director of External Affairs at The Nature Conservancy in Vermont. Especially relevant to this conversation, it is worth noting that I was the previous State Hazard Mitigation Officer at Vermont Emergency Management and recently stepped down from the Vermont Climate Council after serving my three-year term as the member with subject matter expertise in natural hazards resilience. Following graduate school, I actually moved to Vermont to assist the Town of Waterbury with its flood recovery post-Irene. I say all this to note that I have been focused on climate adaptation and flood resilience in Vermont for the entirety of my career and am eager to see big progress made for the benefit of Vermonters and the natural systems that support us.

Despite significant, noteworthy progress made by the state in the aftermath (both short and long-term) of Tropical Storm Irene – (perhaps most notably FEMA's recognition of Vermont's Stream Alteration Rule as codes and standards) – we continue to feel the impacts of flooding. Whether our home has been damaged or even destroyed, we've been cut off from services from road damage or floodwaters, our kids' school closed temporarily or our local business closed its doors for good, whether our lifelong neighbor moved to seek safer residence or our flood insurance rates continue to climb – flooding has affected most of us. In a financial sense, the taxpayers of the state, have expended *tens of millions of* dollars annually responding to and recovering from disasters (more on this later), but with each passing storm, we inch the needle in the right direction.

However, given the reality of more frequent, more severe flood-related disasters, coupled with our historic settlement pattern that nestled our towns and villages right up against our rivers, we have got to start tackling this like the public safety threat and financial crisis that it is. I believe S.213 will help us get there.

Before diving into a case for the bill, of which, I only plan to speak to the rivers-related sections in the hopes that you'll all hear from folks far closer to and more intelligible on wetlands and dams, I want to first explain a nuance about Vermont's flood hazard profile; namely, the difference between inundation flooding in the floodplain and erosive flooding in the river corridor.

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Now that we've separated out our flooding problem into the two buckets: a) inundation flooding in the floodplain that carries ~20% of the damages and b) erosive flooding in the river corridor that carries ~80% of our flood damages, here's my case for S.213 broken down into four issue areas: 1) public safety, 2) taxpayer-funded burden of flooding, 3) municipal burden, and 4) the natural resource itself.

- 1. First and foremost, this is about *equitable* public safety.** Yes. We have inherited our historic settlement patterns from those that came before us and we have a changing climate that is exacerbating the issues these settlement patterns pose. And, we must make decisions, and we must do them soon, before the next guaranteed flood hits.

Four percent of Vermont's single-family homes are located in the floodplain, whereas 12% of mobile homes located in mobile home parks are located in floodplains. That is a three-fold

increase to Vermonters who are generally less fiscally able to recover from a devastating flooding event. To use a more discrete example, the 2021 VCA quotes a 2020 UVM study that looks at floodplain restoration to equitably mitigate flood risk. I want to read from you here:

Lewis Creek is a small watershed in Vermont that is vulnerable to flooding due to mountains upstream. 41 properties are located in the SFHA, many of which are manufactured or mobile homes. [Damages] are heavily skewed towards lower-income properties, with the bottom quartile [of income earners] incurring 91.5% of damages and 25 mobile homes incurring damages 5x their appraised value.

Overall, this case study is an excellent example of the inequitable weight of flood exposure in Vermont communities.

Our most rural towns – those with part-time municipal staff and three-person volunteer selectboards – are already incredibly overburdened in navigating the day-to-day management of a town and its budget. Asking them to navigate the complex – or “patchwork” – style of regulatory programs, and to enforce them – is unfair to them and to their communities. Our current set-up *significantly* favors Vermont’s more resourced towns, creating a feedback loop that establishes greater access to public funding (and consequently greater risk reduction) than our smaller, more rural towns. To create a resilient Vermont, we must support policy and funding solutions that are equitable.

2. **Next, it is about reducing the taxpayer-funded burden these storms – increasing in both severity and frequency – have on Vermonters.** Since Tropical Storm Irene bore down on Vermont, has experienced nearly 2 federally-declared flooding disasters annually, costing taxpayers tens of millions of dollars year of year to respond to and recover from.

The problem with buyouts. For example, a municipality receives \$2M to buyout 3-4 homes following a flooding event. However, they have not adopted DEC’s municipal river corridor bylaws (ERAF has been an insufficient incentive for adoption, and ~80% of our damages occur from erosion in the river corridor), and thus the following year permit the development of 5 new homes elsewhere in town, also in the river corridor. After the next flood, will we buy those homes out, too? And if so, to what end? In the proposed budget you all will consider in the next few weeks, there are tens of millions of dollars flagged for buyouts, on top of the tens of millions we’ve already spent to buyout fewer than 200 homes. This program, which I used to run, is without question an essential tool to alleviate financial and emotional heartache for Vermonters following storms,

*We are digging ourselves into a fiscal hole that requires a suite of funding **and** regulatory tools to get out of.*

3. I’ve already touched on the complex regulatory framework we have left our towns to navigate, despite acknowledging that our rivers don’t stop at municipal boundaries. In case you won’t hear directly from VLCT, here’s a quote from their testimony downstairs: *“the goal of coordinating the regulation of development in river corridors recognizes that waterways don’t respect municipal boundaries, and what one town does upstream impacts downstream municipalities.”* I’m going to move to the next, understanding that Chris Company will surely delve in here.

4. **It is about protecting our natural resources and improving our water quality.** We need to find ways to reconnect our rivers to our floodplains – of which, currently 75% are disconnected; to store and slow our floodwaters, starting at our headwaters; to right-size our transportation infrastructure; to acknowledge that what is good for our flood resilience is good for our water quality and vice versa (and adapt our funding mechanisms accordingly). Funding floodplain restoration and reconnection projects, limiting development in our largely undeveloped river corridors, supporting healthy forests, wetlands and riparian areas – these are the things we need to do to improve our flood resilience and consequently, our water quality. Putting flooding into the water quality context, I've pulled some data and a graphic from Matthew Vaughan, Chief Scientist at the LCBP, representing preliminary findings from the July floods:
- 62-85% of annual TMDL for Lake Champlain delivered in the five days following July 10 flood. 175.4MT Ph delivered on July 11 alone (VT reduction requirement to meet TMDL is 213MT/yr....)

This isn't a new idea. Limiting development in the high-hazard river corridor is a priority in several state plans – from the State Hazard Mitigation Plan to the Climate Action Plan, from the Forest Action Plan to the Lake Champlain TMDL.

This already is, effectively, the State's policy through both the publicly-funded Emergency Relief and Assistance Fund (ERAF) and competitive eligibility criteria for FEMA hazard mitigation funding. It's also being done through ANR's education and outreach efforts, as well as the work of the RPCs. Take this excerpt, directly from ANR's FloodReady website:

If river corridors are not protected at the community level, we as a State will bear an ever-increasing burden (i.e., in terms of flood disasters and the human misery they cause) when there are less and less places on the landscape where streams can expend the flows and erosive energy of a flood. When we encroach on a river in one location and then armor the river to protect our investment, we very often ensure that the next flood of equal flow will cause even more destructive erosion downstream. Breaking the vicious cycle between increasing costs and increasing risk, can be achieved and is sustainable where we allow floodplains to flood and rivers to meander in those corridors that still remain open. These riparian features are a part of our green infrastructure, that when squandered results in millions spent during disaster recovery to fortify channelization practices and rebuild—with little or no reduction in the vulnerability of our communities.

The state has expended considerable resources – time, funding, energy – to communicate these risks to towns, to assist in both floodplain- and river corridor-related strategy development, to incentivize towns to do exactly what S.213 The Flood Safety Act is saying we need to do.

We know what we need to do. We have known. Now is the time to do it.

Thank you, again, for your time today. I look forward to engaging with you all on this critical piece of legislation.