

Watershed Groups Take Action to Protect and Build Vermont Communities

Lessons Learned from High Meadows Fund Partners, 2015-2019



[Click here or visit \[highmeadowsfund.org/watersheds\]\(http://highmeadowsfund.org/watersheds\) for a 2-page executive summary of this report.](#)

The last eight years have revealed how vulnerable Vermont is to flooding and damage from erosion and that action is needed. Many Vermonters live in river valleys, on winding dirt roads and in hilly or mountainous areas with steep slopes. Our downtowns are often located along rivers, reflecting the early use of our waterways to power mills and factories. The devastating 2011 Tropical Storm Irene and subsequent heavy rainfalls and flooding these past 8 years show time and time again how suddenly any of us can lose our roadways, homes, and even our lives.

Climate change is increasing the frequency and severity of heavy storms, putting Vermont at even greater risk. It is critical to consider our changing weather patterns, existing floodplains, and river corridors as we make land-use decisions in our watersheds¹. These decisions impact more than our own homes, or even the homes of our next-door neighbors—ecologically healthy and intact watersheds help to prevent excessive flooding and erosion miles downstream, and the cleanest water sources flow from healthy, forested watersheds. As flooding and water quality issues continue to mount for many Vermonters, it is increasingly evident that solutions to these issues must be built collaboratively by neighboring towns that share a common watershed.

Prompted by the [Institute for Sustainable Communities' Roadmap to Resilience](#), the result of a statewide push from funders, state agencies, and non-profits to build storm impact resilience in Vermont's communities in the wake of Irene, the High Meadows Fund launched an initiative to help communities collaborate to build more resilient watersheds. For the High Meadows Fund, resilience does not just mean the capacity to bounce back from stresses and disruptive events. Resilience is also the ability to plan and adapt ahead of those events, evaluating the risks and opportunities that lie ahead. In 2015, High Meadows asked teams from different communities within their watersheds to think beyond town boundaries to identify priorities and start taking action. Six projects emerged and High Meadows launched the first phase of its initiative to build resilience at a watershed level.

After this first phase, High Meadows recognized that this shift in thinking at a larger geographical scale needs time to develop and take hold. Building trusted relationships and long-term strategy does not happen overnight, and High Meadows funding made a point of prioritizing the coordination and relationship building necessary to ingrain this thinking in watershed work. In 2017, High Meadows committed to funding a second

¹ A **watershed** describes an area of land that contains a common set of streams and rivers that drain into a single larger body of water, such as a larger river, a lake or an ocean. [Click here for a map of Vermont's major watersheds.](#)

phase with a new cohort of projects and modest funding to Phase 1 projects that had demonstrated a strong commitment to engaging diverse partnerships, fostering a watershed approach beyond one town, and investing time in a steering committee and inclusive community engagement to prioritize projects.

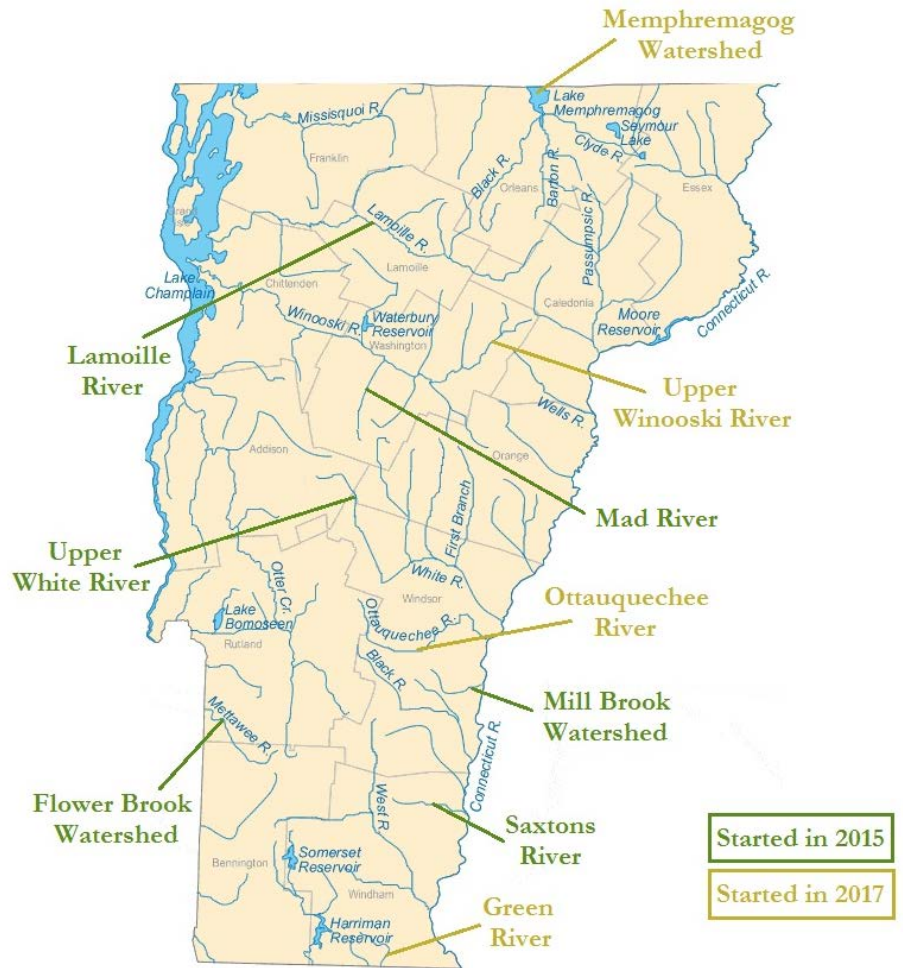
Between 2015 and 2019, High Meadows funded these Regional Planning Commissions, Natural Resources Conservation Districts, and watershed groups to push this work forward:

Phase 1 (2015):

- Friends of the Mad River*
- Lamoille County Planning Commission
- Poultney Mettowee Natural Resource Conservation District*
- South Windsor County Regional Planning Commission
- Saxtons River Watershed Collaborative*
- White River Partnership*

Phase 2 (2017):

- Memphremagog Watershed Association
- Two Rivers Ottauquechee Regional Commission
- Green River Watershed Alliance
- Central Vermont Regional Planning Commission



**These four Phase 1 groups continued to partner with and receive support from High Meadows through Phase 2.*

Each team brought together people from multiple towns and partners with varied experience, expertise and interests. These teams set out to encourage planning and action as a cohesive watershed—a big challenge in a state where land use decisions are mostly made at the municipal level. This work looked different for each team, according to each watershed’s unique issues and opportunities.

This inclusive approach to watershed work was untested in many ways, and these groups were able to identify valuable lessons and unforeseen challenges along the way. To ensure this learning was shared and valuable at a larger scale, High Meadows convened project leaders throughout the initiative and maintained ongoing

discussion in an effort to put together a blueprint and network of resources for groups aiming to engage in this work in the future. In 2017, we issued a report outlining the lessons we learned with our watershed group partners in the initiative's first phase, which you can read [here](#). High Meadows is now issuing this updated report, which reflects how our thinking has evolved since then and where we see this work going in the future.

We're very grateful for the time and effort that these watershed groups committed to sharing their successes and lessons learned with us. We distilled the takeaways and insights of these groups into a few overarching themes, which we'll explore further throughout the report:

- Steering committees are critical and require effort
- Building diverse partnerships requires new language
- On-the-ground action energizes communities
- Watershed organizing *is* community organizing

Because High Meadows recognizes that climate change, increased floods, and intense storms will continue to impact Vermont's watersheds, we see the work of these watershed groups as an essential step towards protecting every Vermonter from devastating storm impacts. We hope the lessons from this report will be useful to other organizations, regional planning commissions, state government officials, legislators, and funders as they continue to push this work forward.

Steering committees are critical and require effort

Watershed-scale thinking, by nature, must be led by a group of stakeholders who represent different communities and geographies across the watershed. We found that this important process of building a collaborative leadership group was often underfunded, pushing community engagement and outreach down the list of priorities for watershed organizations. These projects demonstrated how inclusive steering committees fundamentally change the work of building watershed identity and community, bringing more community members into the process.

Steering committees should be built around a shared watershed identity. Part of the desire for developing a robust and diverse steering committee is thinking more broadly about a watershed identity and reaching across political boundaries. As we learned more about the ways a watershed can connect (or disconnect) neighboring towns and communities, we recognized that geological relationships often requires more complex thinking than just upstream-downstream effects. However, by reaching out broadly to stakeholders within a watershed and starting the conversation, groups were able to build this identity over time.

Project leaders brought together town representatives, landowners, teachers, and community members interested in watershed resilience, uniting people with local knowledge and technical expertise. Town officials used their long-standing

“Prior to this project, there was no Saxtons River watershed identity, and flood mitigation was being addressed piecemeal through isolated projects. Aside from construction material sharing following Tropical Storm Irene, there was relatively little inter-town collaboration on watershed issues, despite a long history of flooding. These initial conversations stemmed from the realization that the towns could not adequately address the very real threat of flooding as isolated entities.”

–Kim Smith, Windham Regional Commission

relationships with businesses and landowners to help projects reach into communities. Groups found that even establishing a forum for discussion between connected towns represented important progress.

Some watersheds can be harder to unite than others, but even in geographically atypical watersheds, the steering committee process was effective in developing new partnerships. The Memphremagog Watershed Association recognized its large watershed was divided into a number of sub-watersheds with different identities and assorted non-profits and agencies serving these sub-watersheds. MWA created a “stormwater collaborative” (SWC), their rendition of a steering committee, comprised of 14 organizations that came together to share ideas, strategies, and expertise. Balancing many different interests and geographies, this collaborative started by writing a strategic plan to guide its collective efforts, which helped to identify common goals and prioritize projects across a geographically complex watershed.

“What emerged from the development of the Stormwater Collaborative very early on, was that each group cared deeply about the Memphremagog Watershed, but also needed to represent the mission and programs of their organizations, and that corresponded to either a piece of the watershed or included work beyond the watershed.”

-Memphremagog Watershed Association report

Steering committees need to develop a process for prioritizing stormwater projects. We learned that diverse steering committees are naturally prone to being pulled in many different directions by members involved in other projects, so watershed leaders found value in using the steering committee structure to find common goals, or agree on criteria for prioritizing the many potential projects throughout the watershed.

In the Upper White River watershed, the Quintown Collaborative recognized that various partners, funders, and municipal bodies each had different reasons for supporting projects—riparian habitat, geomorphic compatibility, culvert condition, or criticality to transportation. To account for these many interests, the Collaborative designed a prioritization matrix to account for different stakeholders and perspectives in considering each culvert replacement project. By cross-referencing multiple data sets and ranking these many priorities on one matrix, the partners could identify which projects were most important to all partners and who was best positioned to carry out these multiple tasks. Building this tool took time, but now that it has been successfully implemented and supported, the group has a long-term plan for improving storm preparedness, and the steering committee has built momentum. As a result of considering many stakeholders, the project brought in new funding sources and greater support for culvert replacement projects.

“Without an investment in the collaborative itself – the convenings, the planning sessions, the relationship-building, etc. – none of these achievements would be accomplished. And the more we accomplish, the more this intentional, collaborative process becomes self-perpetuating.”

-Mary Russ, Executive Director of the White River Partnership



The steering committee process creates credibility. Collaborating throughout a watershed can also be a powerful strategy for fundraising. When the Friends of the Mad River applied for state grants, the accompanying letter of support from the Ridge to River Taskforce (the name of the steering committee in this case) showed solidarity across the five towns and reflected the thoughtful planning and preparation that had been going on in the Mad River Valley. As a result, FMR was able to bring in over \$600,000 in additional grants to fund continued watershed resilience efforts during this initiative, more than seven times the level of High Meadows support.



Members of the South Lake Partnership steering committee discuss project prioritization at the 2017 Leahy Center Environmental Summit.

“Many Taskforce members acknowledge that supporting grant applications as a collective Ridge to River watershed coalition to the state or other funders results in projects that are grounded in better planning and in greater fundraising success.”

-Corrie Miller, Executive Director of Friends of the Mad River

In many cases, these deep and collaborative planning processes solidified the case for more project implementation funds, but we also found that funding was harder to secure for some groups than others. Specifically, groups within the Lake Champlain basin have significant funding opportunities from the Lake Champlain Basin Program. In addition, Vermont DEC has been moving more towards funding for nutrient and sediment reduction particularly in the Champlain and Memphremagog basins. One of our hopes in this initiative is to promote a broader discussion about ensuring funds for watershed resilience projects are fairly distributed across Vermont, and especially where projects have collective support throughout a watershed and address multiple benefits to communities and the surrounding environment.

Language matters for building new partnerships.

“Resilience” is over-used and doesn’t mean the same thing to everyone. Applied in so many contexts, the word is losing relevance and power. The ways project leaders and steering committees communicated their intentions and priorities proved critical. Projects tested different messages to figure out which messages were meaningful to their town leaders and community members, enabling them to attract more diverse participation in their outreach and engagement.

Language was most effective when it tapped into communities’ pre-existing identities. The White River Partnership originally labeled its area of focus the “Upper White River.” This just did not resonate. The Partnership noticed a variety of buildings and services in the region with the “Quintown” label— the people in the Upper White River watershed identified as residents of the “Quintown Valley.” The Partnership

renamed their project the Quintown Collaborative and almost immediately their work gained greater recognition and interest.

Language can help people understand watershed connections. The Friends of the Mad River wanted to tackle stormwater issues and started with a wonky moniker: the “Watershed-Wide Water Management Program.” Soon, the partners realized that many upland landowners distant from the Mad River did not see the connection between what they do in their forests and what happens to the river. In response, Friends of the Mad River renamed the project “Ridge to River” to unite upland and river valley residents and to help them understand that everything that happens in the watershed, from the mountaintops on down, has an impact on the health and power of the river.

With similar thinking in mind, the Water Wise Woodlands project recognized that even a simple word like ‘forest’ can present barriers for engaging with landowners, as one of their project leaders explains:

“People with a backyard wood lot may not necessarily think they own a forest. The committee recognized the need to appeal to land owners who own both large tracts and small. Using the term ‘woods’ instead of ‘forest’ can be more encompassing and appeal to those property owners who own smaller acreages of land.”

-Clare Rock, Central Vermont RPC

Specific language is more effective than jargon at engaging community members. The Quintown Collaborative found that when it stopped talking generally about “resilience” and began to talk about replacing culverts and protecting floodplains, potential project partners supported the project unanimously and began to get involved in more meaningful ways. Project leaders needed to get out of their technical mindsets and communicate with a specific, accessible vocabulary that was immediately relevant to the general public. They also found success when they developed specific messages for different target audiences.

One carefully worded road sign used by the Green River Watershed Alliance captures this lesson most clearly. The alliance asked for help from local road foreman to get the word out for an upcoming, local meeting, and the foreman offered to use the large electronic road sign pictured below. Limited by space on the sign and focusing on a tangible, relatable topic, the foreman boiled down the complex concept of community watershed resilience into two words: “storm impact.” The meeting far exceeded attendance goals, bringing out over 70 people.



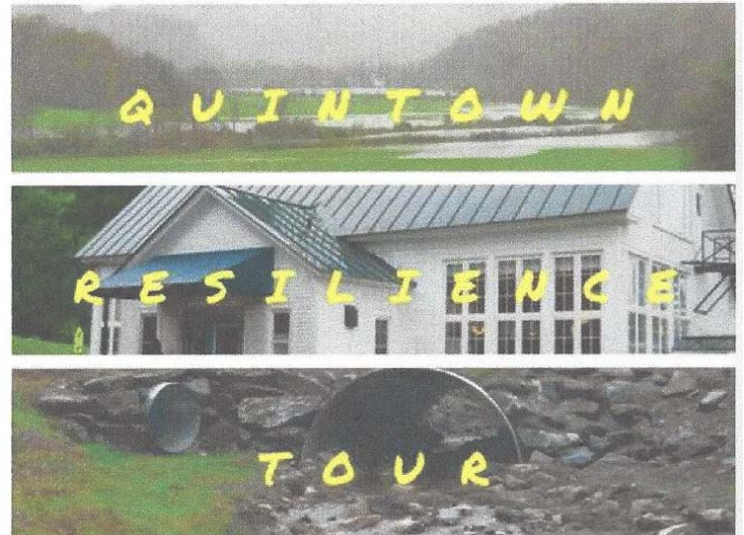
Over the course of the projects, we noticed that groups were constantly honing their outreach efforts, learning from community input about how to best connect with landowners and community members that weren't typically interested in "environmental" work. However, we also realized that intentional communications is challenging work that requires capacity and expertise that many of these small watershed groups lacked. When these leaders attended a [Vermont Story Lab](#) workshop together, or brought in an outreach consultant like [Community Workshop](#), they later told us the use of arts, storytelling and creative communications in combination with local knowledge made engagement tactics much more effective. These kinds of resources offer critical support in getting this challenging outreach work off the ground.

On-the-ground action energizes a community

Action illustrates to a community that change is possible and demonstrates what success looks like. Action on a large scale, though, cannot happen without wide-ranging support. There is a tension between jumping in to get something done and stepping back to make sure the community is on board before undertaking on-the-ground work. Our partners' projects thought a lot about how to balance the tangible and intangible work of watershed resilience. Some projects began with a set list of implementation actions, while others asked community members for help in setting priorities for action. Project leaders came to understand that investing in community engagement early would pay dividends over time. That said, projects that focused purely on outreach and process in their first year often looked back and commented that they should have had a little more on-the-ground action and results at the same time to entice community members to get involved.

Public tours can show community members what resilience-building action looks like on the ground.

A few of these watershed partner groups successfully conducted tours of their watershed as a way to bring communities together and highlight stormwater projects and flooding impacts. The Quintown Collaborative invited town officials, technical partners, business leaders, and legislators to participate in a tour of resilience projects across the valley. The tour included stops at a flood-damaged property in Granville in the process of becoming a town park and a new bridge at the site of a failed stream-crossing culvert in Rochester. Representatives from four of the five towns in the Quintown Valley participated. Tours are an effective way of making the hard work of resilience action visible and memorable to the community. The Quintown tour engaged new partners by making on-the-ground, resilience building actions real and relevant to community members.



An advertisement for the Quintown Collaborative's Resilience Tour in August 2016, in which participants visited three sites along the White River, traveling together in a school bus. Image credit: White River Partnership.

"If no one knows what's been done, we've lost an opportunity to build awareness and to garner support for future projects."

Mary Russ, Executive Director of the White River Partnership

Planting trees to establish riparian buffers brought out the crowds. Establishing riparian buffers benefits aquatic and riparian habitat, reduces nutrient and sediment erosion and increases flood resilience. Several projects used a tree-planting event to educate attendees about river resilience challenges and solutions, and to bring many hands to make light work of planting trees by the hundreds. Often school-aged children were involved, offering an experiential opportunity to learn, and project leaders observed that where kids are engaged, parents follow (and learn).

“We learned that people really rally around their kids, even if they don’t have children in school anymore. The community support and involvement in these school-related projects was palpable, and garnered overall appreciation for watershed study.”

-Green River Watershed Alliance Report



A rain garden built at Warren School, supported by Friends of the Mad River. Image credit: Friends of the Mad River

Several projects, with additional state funding, undertook rain garden improvements at the edges of school parking lots. Not only did these projects help reduce stormwater run-off problems but by involving teachers and students (and their parents), the rain gardens became a great educational tool in a public and visible location.

Hands-on engagement tools can help build community support. We saw multiple teams develop hands-on tools and strategically employ them in support of implementing stormwater resilience projects. The key, in these cases, was to strike a balance between technical relevance and public accessibility. A number of our projects brought stream tables demonstrating river

dynamics to classrooms and community events to this effect. Emily Davis from the Green River Watershed Alliance project echoed comments from other project leaders in stating that, “community members responded better to practical events or hands-on learning.”

Watershed Organizing *is* Community Organizing

[Our white paper on thinking like a watershed](#) outlined the ways that watershed identity and awareness need to build on existing community values and relationships. While many of the watershed projects embrace the concept to think like a watershed, we found this work is easier said than done, and almost across the board, watershed groups found their outreach work took more time and energy than they had planned for.

Each watershed team tried an array of community engagement strategies to spread their messages. Rather than simply putting ads in a newspaper or sticking flyers in mailboxes, project leaders had to develop relationships with the community and determine whose voices carry weight throughout the watershed, and on top of that, building trust with skeptical landowners is a process that cannot be expedited by any one event or conversation.

“It’s not going to be simple. It’s a complex problem, so there’s probably no simple solution. There needs to be a cooperative effort from everybody: the towns, the highway departments, agriculture, the State, private landowners big or small. It’s going to have to be a cooperative effort.”

-Keith Mason, Pawlet Highway Foreman

Often this organizing work is underfunded and under-recognized as the lynchpin to shifting a community to think more holistically and prepare for storms, flooding, and cleaner waters through strategic investments and land use planning.



Engagement doesn't always start with talking about the watershed. In many cases, watershed identity starts with

building relationships and trust between neighbors and local organizations. The Water Wise Woodlands project began their outreach approach with a targeted postcard mailing sent to forested landowners about ways that they could better steward their forests. While the postcard used careful and encouraging language to explain the importance of forest health, there was no pre-established relationship with these landowners, and little engagement came of it. Pivoting to a more relationship-based approach, the group hosted a free community breakfast that included programming about flooding and forest stewardship, followed by workshops for landowners and crafting activities for kids. The breakfast drew 70 attending community members, shattering the group's goal and garnering lots of positive feedback.

This strategy of making workshops and events primarily relatable and inviting before barraging landowners with watershed resilience concepts and requests to change their land management tactics was effective across multiple projects.

Community engagement works best when you bring it to where people already are. It is not enough to provide a free meal for folks who come to your event, though good food is still important and appreciated! Projects instead needed to bring their work to their residents

and strategically bring watershed-scale thinking and organizing to where resilience conversations are already happening. For example, one group offered free workshops on how to flood-proof buildings, but it didn't attract contractors and tradespeople as they had hoped.

Watershed groups also found it challenging to reach past the handful of engaged folks that already attend community meetings regularly. While it's important to value the input of those attendees, they often represent a skewed fraction of the watershed's population, and real progress depends on reaching beyond those people to find voices that have not been as engaged.

Partnerships with road crews were often critically important. After assembling town planners and community leaders from each town, watershed groups needed a partnership that linked planning and prioritization to actual infrastructure improvements, and often found them in their local road foremen. These "local heroes" brought indispensable local knowledge and stormwater

"Personal outreach is key. Press releases, Facebook posts, and bulletin boards flyers are great, but they aren't enough. People need to get on the horn within their own personal networks to get a good turnout. It's a lot of work, but rewarding to get a full room."

-Green River Watershed Alliance Report

"Thanks so much for all you put into making today's gathering so successful. It was clear a LOT of work had gone into making it run so smoothly. I'm amazed at how much I learned. The tree identification walk was great, too, with a botanist and a forester to discuss the difficult IDs. The breakfast was great, too!"

-Email from Cabot resident and pancake breakfast attendee

"A contractor focused workshop would be more successful as part of something that they normally would attend, like a trade show. It is just too hard for builders and other trades people to attend night presentations during the busy construction season."

-Lamoille County Project Leader

“People love their road crews. People love First Responders. People love hearing their stories, which are always about honest, hardworking people who are intimate with their landscape. They know everything, and these folks are powerful watershed allies, and the partnership can be very strong. Once you get the Road Foremen on your side, they can make (just about) anything happen for you.”

-Green River Watershed Alliance
Report

expertise, and including them made the process more concrete for everyone else involved.

Two groups evolved their partnerships with road crews into engaging and productive convenings. Friends of the Mad River hosted four Road Roundtable discussions with road foremen and the Ridge to River steering committees to discuss common stormwater challenges and institutionalize road work throughout the watershed, across town boundaries. The Green River Watershed Alliance partnered with road crews for a community storytelling event, inviting the community and road crews to share their experiences in responding to damaging flooding events. In both cases, road foremen represented a credible, trustworthy voice in the community.

Outreach should be strategic, focused, and creative. In any community organizing effort, it can be challenging to reach beyond the same crowd of engaged citizens that show up to most community meetings. Town officials, selectboard members, and school children are all important audience members, and each require a different outreach approach. [Rebecca Sanborn Stone](#), a community engagement consultant, helped Ridge to River in the Mad River Valley develop a [strategy](#) for its communications and engagement campaign. The project surveyed residents of the valley to understand their level of familiarity with watershed issues and barriers to taking action, developed profiles of the different audiences they were trying to reach, and came up with specific messages that would resonate. This project embodies the time-intensive nature of targeted outreach work, but also shows how an inclusive engagement process can better illustrate next steps for these groups to make progress on storm preparedness.

Projects employing creative approaches to engagement and education witnessed greater numbers of people attending and more success in their projects. Green River Alliance hosted a “Dark and Stormy Night” meeting that started with storytelling from Tropical Storm Irene but then considered subsequent flooding events and heroic efforts by various local residents. Hands-on workshops using local resources or examples was effective both in bringing people out and spurring subsequent actions, especially when they coupled with seasonal activities that the community enjoyed. Watershed groups learned throughout planning these events that it’s important to establish a reputation in the community for creative and exciting outreach, not just when public support is needed, but all year round.



Guilford residents were invited to attend this storytelling event in the cafeteria of the school, where a to-scale map of the Town of Guilford was placed with masking tape on the floor. People could trace the pathways of roads and rivers, and see the outlines of the three different watersheds in town. People connected each other’s narrative to their geographic location in town, and specifically to their watersheds. Participants were able to understand who their watershed neighbors are; an otherwise abstract idea.

Image credit: Green River Watershed Alliance

Maintaining Momentum

It's important to be realistic: this work takes time, and its impact can be tough to articulate and measure. Many of our projects went over budget, as their community engagement took more time or cost more than expected. Along the way, High Meadows had to adjust our own expectations about what outcomes can be achieved over the course of an 18-month grant. At first, we hoped to see outcomes such as new local ordinances, joint land conservation projects, strategic removals of structures, or tapping a downstream jurisdiction to contribute to financing a stormwater project upstream. We did witness some actions along these lines, but many groups found that watershed identity needed to be built from the ground up, starting with individual relationships and behaviors, before the whole community could support larger regulatory changes.



Memphremagog watershed residents at a conservation ski & snowshoe event, learning about conservation practices and the effects of the landscape on stormwater runoff. Image credit: Memphremagog Watershed Association

Though funders often seek concrete outcomes from investments, our experiences show ***modest investments in the connective tissue of watershed groups allowed for more strategic, equitable, and effective resilience building.*** Without this connectivity and communication, town residents are much less likely to think beyond their town borders to consider their neighbors upstream and downstream.

We also learned the value of connectivity *between* watershed groups through this initiative. Watershed leaders are often stretched so thin they rarely have time to engage in collaborative problem-solving or build relationships with other groups doing similar work around the state. A critical outcome of this work was the development of a cohort of watershed leaders. These groups have informally formed connections and can rely on each other to ask questions or share common challenges. Additionally, these leaders (along with [Watersheds United Vermont](#)) were able to articulate the importance of watershed organizations and thinking holistically about watershed health at the state level, testifying before legislative committees about the value they bring in prioritizing clean water projects. As a result, watershed leaders have been engaged with DEC during the roll out of Act 76 and will have a seat at the table on Basin Water Quality Councils across the state as Act 76 is implemented.

As this work moves forward, maintaining those connections between watershed groups is essential. In addition to supporting individual watershed groups, High Meadows has also provided support for Watersheds United Vermont to keep this momentum and collaborative energy going in the years to come.



Stormwater from Coburn Brook flooding the streets of Troy following the Halloween storm in 2019. Image credit: Lindsey Wight.

With momentum established and watershed identity building in these communities, we see a need for more funding that acknowledges the value of outreach and education in this process. We heard from these groups that other funding sources are often restricted to individual implementation projects over limited, discrete time periods, making it challenging to keep the big picture in mind. This also makes the watershed organizing aspect of this work vulnerable, as sustained outreach and engagement remains important even while implementation projects are being carried out. Without funding that recognizes the value of engaging communities and supporting steering committees, implementation projects lack the community input and strategic approach needed to ensure that every Vermont community is prepared for the next storm.

Philanthropy alone cannot support these watershed efforts at a statewide scale, particularly because the need across the state will likely rise with increasing climate change impacts. Given the many public benefits of building watershed resilience, including cleaner water, safer roads and bridges, reduced flooding impacts, and intact wildlife habitats, state and federal funding are essential. This initiative has shown us that resilience efforts must be coordinated, and Vermont's organizations focused on watershed scale planning and outreach are well-prepared to take on the challenging but important work. What's more, if watershed groups are to participate in rulemaking, as they were invited to by DEC, they need funding in order to do so.

Beyond 2020, High Meadows expects to offer modest levels of support to a limited number of local groups. We encourage the legislature and administration to include support for watershed level planning and engagement in the work supported by the Clean Water Fund.

We're grateful for the tireless work that went into these projects and for all the community members involved. These groups have demonstrated the importance and feasibility of thinking at a watershed scale at a time when this approach is increasingly critical to protecting Vermonters from future disasters. With the groundwork laid and a cohesive network of watershed thinkers and leaders established across the state, we look forward to seeing more Vermont communities thinking and acting like a watershed.

Written by Bill Roper, Betsy Hands, and Bobby Lussier

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Individual Project Summaries – Phase 1 (2015-2017)

The Quintown Collaborative

Project Lead: Mary Russ, White River Partnership (mary@whiteriverpartnership.org)

Towns: Hancock, Granville, Pittsfield, Rochester, and Stockbridge

Outcomes: Created a matrix to help partners prioritize culvert replacement projects. Implemented river corridor conservation easements, riparian buffer plantings, and culvert replacement projects. Led a *Resilience Tour* to highlight projects.

Partners: Green Mountain National Forest, Two Rivers Ottaquechee Regional Commission, Vermont Agency of Natural Resources, Vermont River Conservancy, and the towns of Hancock, Rochester, and Stockbridge.

Website: <http://whiteriverpartnership.org/quintown-project>

Saxtons River Watershed Collaborative

Project Lead: Emily Davis, Windham Regional Commission (edavis@windhamregional.org)

Towns: Grafton, Rockingham, Westminster, and Windham

Outcomes: Hosted landowner workshops on river corridor land management; created education program with a stream table; strengthened local floodplain ordinances; and implemented riparian buffer plantings and river corridor conservation easements.

Partners: VT River Conservancy, Windham Natural Resource Conservation District, VT Agency of Natural Resources, Trout Unlimited, Composting Association of VT, CT River Conservancy, Rockingham Conservation Commission, VT Association of Conservation Commissions, Grafton Elementary School, SE VT Watershed Alliance, and the Windham Foundation, and the towns of Grafton, Rockingham, Westminster, and Windham.

Website: <https://saxtonsrivewatershed.wordpress.com/>

Ridge to River: A Mad River Valley Coalition for Clean Water and Resilience

Project Lead: Corrie Miller, Friends of the Mad River (info@friendsofthemadriver.org)

Towns: Duxbury, Fayston, Moretown, Warren, and Waitsfield

Outcomes: Developed a watershed wide stormwater management program. Launched a communications campaign about the importance of stormwater management.

Partners: Central VT Regional Planning Commission, Mad River Valley Planning District, VT Natural Resources Council, and the towns of Duxbury, Fayston, Moretown, Warren, and Waitsfield.

Website: <http://ridgetoriver.org/>

South Lake Watershed Partnership

Project Lead: Hilary Solomon, Poultney Mettowee Natural Resource Conservation District (pmnrcd@gmail.com)

Towns: Danby, Pawlet, and Tinmouth

Outcomes: Developed a checklist of resilience actions each town can take. Engaged community members in project prioritization.

Partners: Green Mountain College, Middlebury College, Rutland Regional Planning Commission, VT Department of Environmental Conservation, VT Department of Forest, Parks, and Recreation, and the towns of Danby, Pawlet, and Tinmouth.

Lamoille Watershed

Project Lead: Seth Jensen, Lamoille County Planning Commission (seth@lpcvt.com)

Towns: Cambridge, Jeffersonville, Johnson, and Wolcott

Outcomes: Completed a flood model for the Lamoille River; evaluated problem sites and identified actions. Led flood resilience workshops for contractors. Facilitated stormwater project and education at Cambridge Elementary School.

Mill Brook Watershed Group

Project Lead: Cindy Ingersoll, Southern Windsor County Regional Planning Commission (cingersoll@swcrpc.org)

Towns: Reading, West Windsor, and Windsor

Outcomes: Prioritized and implemented stream geomorphic assessment recommendations. Removed berms, small dams, and completed other river improvements. Increased public awareness of flood resiliency with stream table presentations and teacher training workshops.

Partners: American Precision Museum, Ottauquechee Natural Resources Conservation District, and the towns of Reading, West Windsor, and Windsor.

Individual Project Summaries – Phase 2 (2017-2019)

Green River Watershed Alliance

Project Lead: Emily Davis, Windham Regional Commission

Towns: Marlboro, Halifax, Guilford

Outcomes: Formation of broad-based Steering Committee that met 13 times; created mission statement, logo and robust website; reached over 1500 people; creative placemaking employed artists and local museum and introduced to 3 local schools; conducted several workshops; produced comprehensive natural history of Green River watershed; creation of the Halifax Conservation Commission; Road Foremen and “Dark and Stormy Night” public meetings big successes

Partners: Windham County Natural Resources Conservation District, Connecticut River Conservancy, Deerfield River Watershed Association, Vermont Department of Environmental Conservation, Vermont River Conservancy, Vermont Performance Lab, Brattleboro Museum and Art Center

Website: www.greenriverwa.org

Water Wise Woodlands

Project Lead: Clare Rock, Central VT Regional Planning Commission

Towns: Cabot, Marshfield and Plainfield (also known as Winooski Headwaters Community Partnership)

Outcomes: Developed logic model to guide work; produced GIS analysis that prioritized key, wooded parcels (and enabled contact with the owners); wrote a resource guide on managing woodlands for resilience; conducted on-the-ground woodland workshops; produced a cartoon for outreach

Partners: Friends of the Winooski; Vermont Woodlands Association

Website: <https://winooskiriver.org/water-wise-woodlands.php>

Building Stormwater Resilience in the Memphremagog Watershed

Project Lead: Kendall Lambert, Memphremagog Watershed Association

Towns: Newport, Craftsbury and subwatershed of the Clyde River

Outcomes: Formed a Stormwater Collaborative with 14 partners to guide the work; wrote and adopted comprehensive 3-year strategic plan; conducted 15 “Lake Wise” assessments; held workshop series on shoreland erosion control methods; conducted road erosion inventory for Craftsbury; fieldtrips with local schools; worked with local churches

Partners: Fourteen local organizations!

Website: <http://memphremagogwatershedassociation.com/en/>

Our Ottawaquechee River

Project Lead: Jessica Richter, Two Rivers Ottawaquechee Regional Commission

Towns: Ottawaquechee region

Outcomes: Developed tag line and graphics; conducted 9 outreach events including five stream table demonstrations; integrated watershed education at Marsh Billings and several local schools; buffer planting along the Ottawaquechee River

Partners: Ottawaquechee Natural Resources Conservation District

Website: www.trorc.org

Continuation of Phase 1 Projects through Phase 2

Ridge to River

Additional Outcomes: 8 task force meetings; 35 “Storm Smart” Assessments; developed seasonal focus for Storm Smart messaging; 5 participating towns’ Planning Commissions all proposed stronger stormwater runoff language in regs with adoption less successful; hosted 3 Road Roundtables in individual towns involving members of selectboard, planning commission, a town manager and the road crew; conducted a “Climate of Change” community-wide forum; witnessing greater stormwater and resilience literacy amongst the many local boards and commissions; completed 2 rain gardens at local schools; designed and constructed an experimental dry well at road-runoff problem spot

Quintown Collaborative

Additional Outcomes: Continued facilitating Collaborative meetings; prioritized River Corridor Plan along Hancock Branch river eventually resulting in funded tree planting, dam removal and flood plain restoration projects; utilized new culvert replacement matrix to identify 7 high priority needs, with funding for all 7 expected; modeled creative funding mechanisms for culvert replacements; helped conserve 32 acres of active floodplain in Gaysville and an adjoining 9 acres in Stockbridge

South Lake

Additional Outcomes: continued consulting with Phase 1 towns; wrote several grant applications; monitored Flower Brook water quality; implemented gully stabilization project; completed landscape assessment of phosphorous and sediment sinks in watershed; completed tree planting and invasives-pull project; finalized Flood Resilience checklist; towns more proactive about preventing flooding