

Hudson River
Watershed Alliance



Hudson River Watershed Alliance Watershed Needs Assessment Appendix

January 2022

Introduction

From 2019-2021, the Hudson River Watershed Alliance conducted a needs assessment to better understand the needs of watershed groups in the Hudson River watershed. The purpose of this study was to delve more deeply into the specific issues facing watershed groups and learn more about their goals, challenges, barriers, needs, strengths, and accomplishments. The Hudson River Watershed Alliance will use this information to develop programs and technical assistance, which will help watershed groups meet challenges and barriers, leading to a community of effective watershed advocates and stewards. The Alliance will also share the results with a wide range of partners.

The [Watershed Needs Assessment Report](#) summarizes our key findings, along with methods. This Appendix includes more detailed information, with specific quotations directly from the 56 interview and focus group participants. Focus group participant statements are noted; all other statements were from interview participants. We have kept all participant information confidential.

Acknowledgements

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Challenges, Barriers, Needs

Overview

A challenge is a difficulty that the watershed group is facing. Challenges can be internal to the watershed group, external, or be focused on specific watershed issues. (Watershed-specific challenges are included in a separate section.) A barrier is something that prevents a watershed group from achieving their goals. A need is something that the watershed group requires to overcome that obstacle.

We found that challenges, barriers, and needs were significant for watershed groups. Internal challenges included issues like capacity, membership, organization and funding. External challenges included working with municipalities or community partners, regulations and policies, and program logistics.

To better understand watershed group challenges, barriers, and needs, we asked interview participants:

- What’s not working for you?
- What are your group’s challenges?

- Challenges internal to your group?
- External challenges? In the watershed?
- What does success look like?
- What are your goals for the watershed? For your group? Projects?
- Do you have long term goals?
- What would make you more successful?
- Are there barriers to meeting your long- and short-term goals?
- What are the barriers to accomplishing your watershed management goals?
- Do you feel like you or your group is lacking technical skills?
 - Other needed resources?
- What are your group's needs?

We asked focus group participants:

- What do watershed groups need to be more successful or meet their goals, from your perspective?
- What does a successful group look like?
- What barriers or challenges do watershed groups face to accomplish their goals, from your perspective?
- Do you feel like watershed groups are lacking certain skills? (Technical or otherwise)

Watershed Group Capacity

Limited time and capacity

The most-cited challenge for watershed groups is their capacity. Organizational capacity is defined in various ways: the ability of an organization to get work done; to be effective; and/or to fulfill their mission. Barriers to capacity can include human, financial, and other resources. This challenge was evident on a variety of scales, from individuals, to within watershed groups, to the nonprofit and agency partners that support watershed group work.

Watershed group members, both staff and volunteers, have an intense workload with limited time and capacity to manage everything. It takes a lot of time to keep a group together, along with needing to learn certain skills that may not be in their background.

"[I need] more time in the day, which is everybody's concern."

"And everything is seen through the lens of capacity, too... I organize the meetings, I attend the meetings, I take the notes for the meetings, I do the actions on the meetings. In a bigger organization, the more senior person comes in, they have somebody taking the notes, they have somebody following up and they manage them. And I'm not saying – I don't know that I'd want to be a manager but – I need hours to work and I'm constantly called away from different things. And because we're small and we have so many different things going on, my brain is switching gears every hour and it's exhausting... I'm doing triage all the time and jumping from

thing to thing. So that's a huge challenge and still related to capacity... It's very different, staff work and big picture. I have to do both. I have to do it all, really."

"That's basically a part-time position that takes up my full-time life, but that's ok."

"And some of this stuff is, you know, with three [staff] people here, there's only so much we can do. And if I can be one of the thorns in their side to keep the green infrastructure stuff going, then I'll be happy with that."

A focus group participant that provides staff support for a watershed group noted:

"I feel like this is very cliché, but just like capacity, right? So I know in my experience right, now I kind of am the person that's like leading the [watershed group] and ... it is a part of my job, but it's almost kind of like a passion project of mine that I've taken it on to kind of to guide it. And you know, I'm a teacher, so that's my background, so I'm kind of figuring out all of this stuff like... figuring out how to create a guiding document and how do you create a mission statement? ...[T]hat's why I think a lot of these groups end up having these retirees who have time on their hands because, yeah, it's just there's a lot... I know in ours, there's such a diverse group of people that we have from different organizations, and maintaining all of those relationships, which I think I do a really good job at, but I think it takes a lot of time. It just takes a lot of time to kind of maintain those relationships, what everybody is working on, and try to kind of bring it all together, so I think it's more of like a capacity thing. Just having somebody to help kind of keep that all together is a lot."

Watershed group members who work other jobs may not have the time or energy to fully dedicate themselves to the watershed group in the way they would like. In general, people don't have a lot of free time to devote to volunteer work, and this makes it challenging to find new volunteers or watershed group members.

"I think also having enough people who have the time to devote, which I used to have, I just don't now. So, nobody's retired in our group, everybody works. So that's a problem... It takes people who have that kind of time and brain clearance to be able to dedicate themselves to something."

"I guess people with more time to devote to this. In today's world, at least a number of our residents have, and I had it myself, if you work in a high-tech industrial field or something like that, your free time to do things is not as much. It's becoming even more difficult because of the lack of those jobs around here, which means people are tying in long distance commutes to go to other jobs. I would say if we had in the long run better jobs around the area where people didn't have to commute as much, there may be more time for this and an awareness in the area. When you're in commuter mode and working and commuting twelve hours a day or so, it's kind of hard to find time for other things. Long term economics really affect an ability to do this."

“Because all of this is run on a volunteer basis. And volunteerism, not only in our community but up and down the line along all the communities in the county, is on the decline. It’s sad to say. But, you know, you’re trying to get people who have the time and the ability to be part of the solution by coming to meetings and working with other groups. And there’s less and less people who are willing to make that commitment. And to try to make it happen. Therefore, like anything else, whether you are talking about a volunteer fire department, or you are talking about a group of volunteers that want to help the health of the [watershed], you’ve got less people to work with. And that’s not changing. So as much as people might be concerned about, you know, the quality of the water and they want to be able to use the creek for recreational purposes or commercial purposes, it makes it difficult to try to get programs done and follow through on a consistent basis.”

People with expertise and passion may supporting several different groups, spreading them thin and reducing the time and energy they have available. This goes for both staff and volunteers. It takes time to build the relationships necessary to find new volunteers and leaders.

“The people that I see that get involved in these watershed groups are kind of the same people who go from group to group, or are in multiple groups, and it’s because they already have this expertise and this experience. So it’s hard really to say how much joining one group gets you to the next stop. It’s more to me that it’s likely that it’s just going to be the same groups of people who are just growing, you know.”

“Again, it kind of comes down to finding people, not people who have passion because I think the passion is there. Just finding the time. A lot of us are so torn between all these different groups that we volunteer with, so it’s finding that time.”

“I go occasionally [to municipal meetings] when I need to, but I don’t do it a lot... I’m involved working in my town on certain things, so I only have so much time. So, it’s maybe one of the reasons I want to stop doing [another watershed group project].”

Watershed groups identified a few specific needs related to capacity. In particular, groups expressed a need for a coordinator to move work forward. This was important both for starting new groups and for continuing momentum for existing groups.

“The original effort was to sort of build momentum and start a watershed group... I do think without a dedicated staff person or a person more dedicated to starting a specific watershed group, there was never really a catalyst to get it going.”

“Just, not having a coordinator is delaying the work they could be doing in taking on more of the recommendations... Which are so important and there’s so much to do. ...[Y]ou really need someone that can focus all their energy to kind of really push them forward with the foundational stuff... Things that are kind of simple, but they are significant.”

Capacity is a real barrier for watershed groups to get their work done. For specific projects, taking on student interns could help meet that need and increase the group's capacity. In some cases, capacity is the limiting factor, rather than available funding.

"...finding someone with the dedicated time to do it. So that's why we're thinking a student would be good... But also, we were talking today about applying for a... grant, and it was brought up like, 'Okay it's good to have this money, but do we actually have the manpower to expand... this program?' So that might be a barrier, like we have big ideas, but maybe our capacity can't allow that."

"So that's also another real difficulty that I'm finding, it's just like being able to get the data. So almost all the data I have now, I have a lot of great data for the section of the [watershed] that is in [one] County. But the [other] County and [other] County sections, I don't really have. I mean, I'm sure I could easily get it, but what I've got, you know, it's that time and capacity thing."

This issue of capacity has the potential to be a negative feedback. Potential watershed group partners may be less inclined to work with watershed groups, if they don't have the ability to get their work done.

"They have good intentions, but they often don't have a lot of means or infrastructure or whatever to do the work."

Leadership

Leadership is defined as being able to motivate a group of people to act toward achieving a common goal. Watershed group leaders take on specific responsibilities to guide the work of the group in meeting its mission.

Need people to step up

Watershed groups have struggled with identifying leadership within their groups. This can include people for overall leadership roles or taking charge of specific programs.

"Leadership. Getting people who are willing to commit to leadership for the group. That's always a big challenge."

"I think it'd be nice to have somebody who's willing to step up as chairman, for other reasons I'm not willing to be the chairman of it at this point in time. But I think we need some structure and some officers or something."

"Leadership. Even though we have people that are very active on individual projects, the outreach to the committee, to community side of things is probably [lacking]."

For large watersheds, it has been a challenge to find a watershed group structure that supports local leadership in an efficient way. While there are advantages to streamlining administration and operations of a larger watershed area, and one coordinator can assist, they need local leaders to have a real impact.

“And if each of those [sub-watersheds] had a watershed alliance, with the [watershed group] as the mothership, that they all organize under, that might be a good structure for us. We have the unified board, unified fundraising, unified IRS filings, taxes, you know, all that stuff is taken care of, the printing and all that, graphic design, can all be done at the [watershed group] level. Whereas, the testifying at a local planning board meeting can be done at the sub-watershed alliance level... And I was already holding the reins of the [watershed group], didn't want to run every sub-watershed group that we started, as well. I just couldn't do it. So it all, the lack of leadership has been a huge issue in this. No one taking charge.”

Focus group participants also expressed the need for strong and engaging leadership. Without this, watershed groups may not be able to last.

“...we have a couple of groups that kind of started and faded out specifically on water. So the [watershed group] was one particular project where they formed a watershed group, they did a plan several years ago and that group kind of petered out, because the leadership capacity lacked.”

“They want an engaged leadership position, somebody who is going to be chairing the organization and driving them and making people attend, or encouraging them to attend, and kind of being the spirit of the group. And I think that's critical to the success of an organization, where you have a strong personality and somebody who is going to be shepherding the operations of the group, but encouraging people to want to be a part of that.”

In some cases, the challenge of limited capacity may be the barrier for new leaders to step up. Watershed group members may have leadership skills, but lack the time to play a larger leadership role in their group.

“Yeah, [it's] a timing challenge. I would say we have a few of our representatives who I personally think would be a great person to fit that role in terms of competency, it's just more of a timing issue... It's interesting how the positives and the negatives kind of go hand in hand. With that leadership that's been in place for so long, there might be a sense of comfort in that so there's not necessarily that new leadership that's stepping up to fill that gap. I would say that is probably our number one challenge right now, just because the future of this group relies on having some form of leadership group and that's somewhat in question right now.”

One interview participant expressed the need for shared leadership, especially in partnership with county agencies that may be able to provide capacity and resources.

"I understand the opportunity in the strengths of the single strong leader, but I think there's more sustainability if there's multiple leaders. And to me that's where the county agencies come in. Whereas they can be a paid coordinator to work with a multi-core team, multi-, inter-disciplinary team."

Watershed groups were also concerned about the lack of diversity of people in leadership roles. This speaks to a need for planning specifically around justice, equity, diversity, and inclusion, along with developing inclusive watershed group structures so that newer people feel welcome to take on leadership.

"One of the things I think we struggle with internally is equity in terms of representation of our own staff. And I recognize that I am part of this. So, we are led by women, which is pretty amazing. Our top three people are all women and if you look at what we consider our senior staff, which is five people, four of them are women. That includes the head of development, our director of operations, director of, essentially, the active programs and the executive directors are all females. So that's pretty incredible, but three of us are white females who are not from the [watershed], who are not even from New York. And so I am very conscious of that and would like to see us develop a justice, equity, diversity, inclusion plan to get more diversity on staff."

"But that makes the case for diversity and inclusion, right? To be constantly getting new people and finding ways to make them get involved and feel included. So I don't want to use the term 'replace' as if people were cogs. But there's always capacity there. Take a guy like me. I'd like to be in place for a little while, lead a few things, and then step aside. Still be involved but have younger, you know, more active people with more energy take over. Maybe it goes in a little bit of a different direction. That doesn't bother me. But you know you don't want to feel like you always got to be there forever, you know?"

Without leadership, lack of alignment of goals

Effective leaders can help watershed groups set goals and ensure that their work is aligned to those goals. With a lack of leadership may come a lack of specific mission, goals, and objectives. This issue can have a ripple effect, impacting meetings, projects, partnerships, and more.

Lack of consistent leadership is a challenge, along with a lack of experience. People with leadership potential struggle with limited capacity.

"But the person [in a leadership role] wasn't really one, a water person, or two, a community person. Both things that I had done, right? So, when I got here she was kind of like you should take on my [leadership] role here. In part, I think she did that because she didn't want to do it or wanted somebody to do it, and I understand that. But when I stepped into it, I realized that some of that early momentum that they had, they were losing pretty quick, because nobody really knew how to develop goals and objectives. Or goals and tasks. Or you know, a mission statement... When you see successful groups, they have those things. Because one, it puts everybody on the same page, and two, they're never sitting around wondering, what should we

do next? So, when I got involved, I think a lot of people there saw that I knew this stuff. And a mistake that I made was that I did not take on a leadership role. I just tried to push the group to do it. And I let people take on the leadership role who I don't think had the experience they needed to do it. So, things really dwindled. So, when I kind of came in there might have been, say, one or two people leading things with maybe 10 or 15 people who might show up at meetings. And I helped them develop a leadership team, a kind of core group of people. And I helped them come up with a mission and goals and tasks. But I think the big mistake that I made was, I don't know how else to say this... There's definitely people who come in and out of groups like these, using it as a way to maybe get a job, or maybe they're unemployed temporarily, or they're looking for something to do. And they are kind of trying to use it as a way to build themselves back up. And that's fine. But those same people took on leadership roles, and so they would kind of come and go. And so, we kind of had these sort of two things working against us, where we would have these meetings that would go for like two and a half hours long and we didn't achieve anything. And people stopped coming to the meetings. And then at the same time we'd have people coming in with their own objectives... again, why you need the mission... They tried to do that and then leave when something changed for them... And I really just think... If I could go back and do it all over again, I would have just taken charge... And I would have got rid of these crazy 2.5 hour long meetings, you know, and had them less frequently. And pulled in people who were really interested... just like I said, focus on the community development and stuff that I know about. But instead, I tried to empower other people who I don't think were ready to do it. So, during that period, there was probably five or six people who were [doing] basically everything. Sending out an email, whatever. We have an email list of 300 people, but the same five people were doing the same stuff. Nothing changed. We did develop a mission and we did develop, kind of, some goals. But by that time, I think it had lost so much steam... And we started picking up a few new people and, you know, I started feeling like, 'Okay, well, maybe I don't need to do this. I don't need to take the leadership.' And to be fair, I mean, I really couldn't. I was in a new job, you know? A lot of things were new for me."

It's difficult to develop an organizational structure or specific set of actions without leadership. Watershed group members may be passionate, but lack direction on what would be most strategic. They have concerns about workload and appropriate roles within the group, especially given other roles and commitments like serving as an elected official. One interview participant expressed the need for clear tasks and responsibilities to get the group working together.

"But we haven't managed to like cohesively get together and assign duties and figure out what equipment we need... But, I think part of that is, we don't have a clear cut leader... We've had nobody step forward and say okay, I'm going to run the group... [W]e need, I think, to get an established leader of the group. Maybe whoever is second in charge would be like the leader's right-hand man... But we just, we're kind of just like flying by the seat of our pants right now. We're not super organized. We're not. We're just not... And we didn't even have to do a [watershed group], but there was interest. So we've managed to get a little circle of people who want to make it happen. But we don't have a leader. Like everybody is shying away from taking

charge... I think they are afraid of how much work it's going to be. And they don't want to overextend. And I feel like I have to be very careful doing that, because there's like a line that I shouldn't cross, because of being an elected official... So I hesitate to step forward and say, 'I'll do it.' ...I think some of the people in the group know some of the things that need to be done. With like the sampling and what not. But we haven't managed to like cohesively get together and assign duties and figure out what equipment we need. Like there's been discussion about the equipment and the things that we need but, there's been like no action yet. But I think part of that is, we don't have a clear-cut leader... I feel like, yeah, we need to work on our organizational skills to get this thing really locked in and get it going."

Leadership transitions

Planning for leadership transitions is a challenge. With strong leaders currently in place, new leaders may not feel comfortable or a need to take on responsibility. Several interview participants that currently play leadership roles expressed concerns around the sustainability of their groups.

"...it worries me, if I were to step down right now, that I don't know how that position would be filled."

"...how does it maintain, sustain itself and go from year to year? For how long will it be around? I have no clue. Will it be around as long as...? If [the current leader] drops out somehow, will it be able to carry on? I'm not sure. I'm not sure of that."

"It took a concerted effort to try and get just replacements for our three officers... for vice chair, chair, and a secretary.... I am not running again... And that was true for the other people... who had been doing it for years and years. And just trying to get a commitment from other communities to say, 'Oh yeah, I want to come to meetings, but I don't want to be chairperson. Or, 'I don't want some of the responsibilities that come with trying to pull all of this together... And I see that as a problem going forward, because I feel like the whole thing is falling apart, because we don't have enough participation at the meetings. And you send out notices, make phone calls, and you go to people's offices, and... they just don't show up. And there's no leverage you have. Until they have a problem and suddenly, they become interested, but that's unfortunately, in some cases, it acts as a problem that's almost beyond a solution, that so many public officials don't really pay attention to some of the things that is going on... I made phone calls [to get people to step up]. I went to some town meetings and to village meetings as a representative to try to get more encouragement on having them be able to participate. And that is pretty much it. It takes a lot of networking."

Even successful or higher capacity groups can be at risk if they can't survive a leadership transition. A focus group participant observed:

"... I think that [watershed] group is maybe, if not at risk, at least not as strong as it was, and the paid coordinator is not there anymore, and that's a big, big reason."

Three focus group participants also highlighted the need to maintain knowledge over time and through transitions of people within watershed groups. This also relates to watershed group structure, and ensuring that groups are organized in a way that is sustainable over time.

"I think knowledge management... a lot of times a group will sort of revive and be really interested in collecting a bunch of data, only to find out halfway through that this was done 15 years ago and it's sitting somewhere... [O]ne of the strengths is passion, and it's the passion of the individuals and people in watershed groups that often drive things, so it is tied to those people. And what happens when those people move on or move across the country for some reason? So that is a gap, again, that we were thinking that the municipality level could hopefully maintain, but a lot of small nonprofit community groups have this issue with having a strong personality, and how do you have longevity in succession."

"...you see that kind of institutional knowledge and the momentum just evaporate, that's a huge set back. And it had me thinking... as far as CACs, and typically because CACs have like appointment slots, right? That they kind of have to keep moving, right? Even if they evolve and they kind of shift their focus, as board members come in and out and they have different interest areas. But it would be interesting if there were some way to kind of encourage watershed groups to exist more like that, so that you didn't have that phenomenon, which happens way too often, where they kind of fizzle out or evaporate, and then you don't even know where the documents are, and you know what the next steps are and they've or who has the GIS files."

"I think that the sustainability issue and the skill that is needed to keep that organization going despite all of the changes and the people might be the number one issue. We are lucky to have engaged Cornell Cooperative, and I think that in times of political change and people change that has been very important. And I think I would love to see the state fund grants that would keep that kind of staying force behind. Over the 14 years I've been involved... I've seen many different forms and ways of existing, and I think that the county can play a big role in that, too."

Need for leadership skills

Watershed group leaders may not have the skills or experience yet to handle difficult situations, create a structure for sharing leadership, or grow the watershed group's capacity.

"Then becoming chair, because nobody else wanted to do it, so I stepped up. That means I have to spend more time doing it... I'm not very good at it yet. That's because we're in transition. Now, if we were doing the same thing, and we were doing the same things we used to do, then I could do the same thing that everybody else had done. But we're transitioning, I'd like to think, and that is presenting me with some compatibility problems."

"The people who help me with leadership need to step up. And that has been happening, but it needs to increase. I've never, like, done this before. So I am not - I didn't take all those

management training classes and neither did they. I mean. I'm really trying to be encouraging, but as the founder, there's like, it can be difficult for people to step up when they see somebody who's been dominating like I have been. I mean, I have been dominating! I'm sorry, but I had to. It's hard to dominate less. The grammar is bad. [laughs] The task is hard... I guess I'm not very experienced with things like this. Rules are a little clearer in a business setting; roles and rules and all those things. It's a little more...um, yeah, you can't fire someone in a watershed [group], for example."

Interview participants expressed a need for training around leadership and community organizing, including to bring the watershed group to consensus around key issues and get their buy-in.

"I really think it would be some resources that taught people how to marshal their energy... towards their mission... Leadership is a skill like anything else. Working in community groups is a skill. People don't just show up and know how to do it. So, to teach people how to work as a team, to communicate effectively, to have good leadership. [T]hose are more like competencies, or sometimes they are called soft skills. I don't really like that, because I think they are so important and 'soft' sort of undermines them. But those are the kind of skills good almost in any context. So some workshops where people can see and talk about these issues and learn, this is what works, this is what doesn't work. My instinct is almost to say money. But you can throw tons of money at it, but if you don't have good people in place, that are mission-driven, then when that money runs out, then that's it. And that is what happened... There were good people, but when the money ran out, nobody had a focused goal."

A focus group participant highlighted this same need, in particular making sure that any training is as accessible as possible for watershed group leaders to attend.

"...to offer a leadership training opportunity to watershed groups that was something made more accessible to them, you know, go to them, make it something they can participate in in two-hour chunks or not have to take a day or two off of work, kind of thing. I never really thought about that before... and I think that could be really useful for people because it – I mean, some of the things I'm talking about are learning how to pay attention, to listening to other people, giving people that everybody a turn to talk, trying to keep the meetings fun, keep them on time. Move them along, get stuff done, and make people feel like I'm going home, that we got something done and I like these people and I want to come back. If we could just teach people enough to try to focus on those goals and give them some tools to do it, that could go a long way to helping some of these groups be more effective and stay together longer."

Group Membership

Need for more people

Watershed groups are often small, with an even smaller number of people actually doing the work to move projects forward. Recruiting new members is a challenge. In addition to leadership, watershed groups need more active members to help with the workload. This is especially a challenge for watershed groups that cover a large geographic area.

“Well, we need more people. That’s it. Every group has that same problem, from what I understand.”

“Lack of people and lack of money, that's pretty much the only barriers that I see.”

“...we just need more people. And then we need groups that are doing this and groups that are doing that. We just need bodies.”

“Boots on the ground, come when we have a clean-up, or when we are planting trees and bushes. But, we need more middle echelon people. People who are interested in the creek. They don’t have to be scientists, they just have to be interested in what’s going on with the creek, and doing what they can... We need more people who are emotionally passionate about the [watershed].”

“We just need so many more people, cause it's just too big to even watch. It's not a small stream, you know?”

“Well, I always think different people need to be at the table. But I also think that the people that are there should be there, too. They've got institutional knowledge and good ideas. These aren't dolts. They are good people...”

A focus group participant who had previous experience with watershed group expressed this same challenge.

“We need more bodies, that was the big thing for us, just not having enough people, despite repeated attempts at outreach to the people living along the stream. You know, there were a couple of really dedicated folks who showed up for a long time, but they were the only folks who would ever show up.”

Some watershed groups are losing membership, which makes the work challenging to sustain.

“Since we're small, loss of membership is a challenge. We have to continually hope that we find people that are interested in what we're doing on the small scale that we're doing it.”

"...probably just engagement with some of our members, because there are some members we haven't seen in a few years, one passed away, others, I don't even know if they're still in the county anymore..."

Challenges for growing membership include communicating about the group and its goals, along with outreach to new people who don't already know someone in the group. Watershed groups need to be welcoming to new members or volunteers.

"Well, the biggest challenge is coordination... I think interest in the group is a challenge, because it's still kind of unwieldy and maybe not that appealing to someone who is not a friend, who doesn't know them very well. Someone who doesn't know what to expect."

Several watershed groups spoke to the need for reaching out more effectively to broaden their networks and increase their participation. They are interested in connecting, communicating, and building relationships with new organizations, municipalities, and academic institutions.

"I just keep going back to that same big challenge of how to reach more members of the community, and how to bring more people... We've talked a lot about it but we haven't really done a lot. I'm not sure what we can do."

"For some things, there would be more volunteers... Bringing in more people would bring in more, broader awareness within the community of water issues, water problems, things that we need to be aware of even though we are a small rural community with no big, apparent water emergencies, we do have water issues. And helping more people to become aware of that is a good thing, especially because there are so many people with individual wells and individual septics."

"I just think more participation. And I've been wrestling with how to get that done since I took [on a leadership role]. It would be wonderful if we had a meeting and [all watershed] communities show up. But I don't think that has happened in eight years. And if we can get a commitment from all the communities that are involved, on a volunteer basis, that would be wonderful. And we could get more done than we have already gotten done. If we could get that to happen."

"Another thing has to do with the coordination, so we do need to get other people at the table, and to get those individuals and organizations at the table is hard when you don't have connections with them. And what we have done in the past hasn't been working. So, identifying other methods to communicate and other methods to getting those at the table that you want at the table is an obstacle that we are facing right now... So I guess sharing more of those stories of who might have connections with people that we can hopefully evolve into another person at the table."

"I think we need a better net of people, for sure. And that bigger net of people – most of the schools in the [watershed] are higher education engaged, there aren't that many – of all the

schools, colleges and universities in New York State, turns out there aren't that many in the [watershed], for whatever reason... And so, it doesn't necessarily have to be an academic pursuit, but academia – things fit well in repeated testing and analysis and the thought that goes into understanding what you got. It fits well with higher education, but there's other places that you can go."

A focus group participant that is involved with a local watershed group communicated this issue, as well.

"I think that groups need to have... more involvement. That's one thing we talk about in the [watershed group], you know, how do we get more people involved, and have the group being more representative of all of the municipalities that are in the watershed."

One of the challenges in engaging community members is striking a balance between organizational partners and local volunteers. In one watershed group, the organizational partners are driving the work, and are a strength, but it has been a challenge to incorporate local community members.

"I guess my point is that it's a benefit that we have very strong organizational partners, because the local level and volunteer level momentum, or driving forces, just aren't there."

Defining who a member is may also be a challenge for watershed groups.

"We updated our operating procedures to determine – to outline how – what being a member means. To be in good standing, you have to come to at least one meeting, I think in one year? I'm trying to remember what we settled on. Just try to establish what it means to be a member. And then municipalities who attend but don't pay their dues, and some pay their dues but don't attend, so it's complicated. I'm not sure we landed in the right place on the update, but we'll see how it pans out."

Need to share responsibilities across more people

To reduce the workload, watershed groups need to share responsibilities across more people. Having just a few people shouldering such a heavy burden of watershed organizing is not a sustainable approach.

"So really, and this is the frustration, it's kind of a one-[person] operation ... and I want to grow the organization so that we've got more people doing more things... I would have to say most of the difficulties come from my own limitation."

"Internally, it's really just a small group of people. ...We make up the agendas, we write the letters, and do most of the talking. So it's the old adage, 20% of your people do 80% of the work. And still, have trouble getting all the municipalities to be involved."

“Well, like with any group, there’s like three people that do everything.”

A focus group participant noted this challenge as well.

“I think that in my experience it's been that it's usually a few people doing a lot of work...”

Several interview participants described the challenges of not being able to meet or continue key projects if specific watershed group members were not there.

“I used to handle Trees for Tribes after [one watershed group member] left, and I can't do it, I don't have the time, so we haven't done one in a couple years.”

Burnout

Several focus group participants were concerned about burnout in watershed groups, as a result of such an intense workload. This can also be a challenge for watershed groups that try to take on too much and spread themselves too thin, without a clear goal or mission.

“...I think burnout is a real thing with watershed groups, like, a real problem... I don't know the answer to it, but I know I personally have suffered from it, and so I just think that's something to keep in mind, right and like any kind of volunteer group... it's hard to sustain.”

“I feel like burnout is such a reality for community volunteers.”

“I think sometimes we see people just trying to get involved in everything and not really – and that's great for a short time, but it tends to fizzle out because there isn't a purpose.”

Interview participant that works as staff for a watershed group shared that their nonprofit’s staff was also experiencing burnout.

“More staff would help there. Yeah, we’ve had a lot of staff burnout lately and a lot of turnover then, because people are just overworked.”

Need for more diverse membership

Several interview and focus group participants spoke to the need for more diversity within their watershed group. Several watershed groups commented that the majority of their members are older, white, and male.

“It may be a group that has more retired guys in it than it needs to [laughs].”

“You are dealing with a bunch of old white guys who don’t know how to use anything but a flip phone. Let's put it that way.”

Interview participants expressed concern that so many of their members are older, and the need for more participation from younger people.

"It started with a lot of enthusiasm. I can tell you, some of the problems we're having now is we're beginning to age out, and what comes with age is illness, and sometimes people have to step out for a while and they come back. But I think, maybe almost all of us are over 60 years old, and that comes to mind right away. We do have some younger people in their fifties [laughter]."

"...[W]e're losing some of that strength because people are either getting ill, or opting out, or aging out."

"Well, [youth] bring a certain energy, and they might be more willing to get out there and knock on doors. Or go to planning board meetings, council meetings, and village hall meetings."

Technology can be a challenge for older watershed group members.

"If I knew how to run around a computer [it would make the group more successful]. I don't. That's one of the interesting things about being chair. I have to rely on other people, which I have other people who are very helpful. Say, for instance, writing up the minutes. I'll send them an agenda of some ideas, they'll print it out, and it'll get out to the group. Being on the website, you know, putting input into the website. I don't do that, I don't handle that. I'm not that savvy. I have a smartphone and that's it. I don't have a computer."

Interview participants were also concerned about the lack of racial diversity in watershed group membership, and expressed a desire to ensure that their group more accurately represented the demographics of the watershed. One watershed group expressed the need for training and education on this topic.

"Well, I mean the [watershed] is not really that diverse a place, but we're a pretty white organization. So maybe that's on us, that we haven't sought out people in [one municipality], that has a big Latino community or, you know – well, [another municipality] is outside the watershed. But there's a lot of white farmers in the... watershed."

"I think that adds to the diversity that we have, and of course, we want to make sure the demographics are represented within our watershed, which we are starting to do but that's an ever-evolving kind of learning curve for us too. So, I would love more training, anything... And then making sure that we are able to tap into the underserved communities that are within our watershed. I mean, [one municipality] is an environmental justice area, so we want to make sure that we are able to connect with the communities that we want there. I think we're starting to identify how to do that but I'm also, I'm always eager to learn more because environmental justice is one topic that I don't know much about, so that's something that I hope we all educate ourselves on."

Focus group participants also spoke to this challenge, and the need to improve watershed groups' knowledge and skill set to engage more diverse members.

"I do think some watershed groups aren't as successful at gathering a diverse group of individuals to work with them... [A] lot of the people who serve on the watershed groups that I've worked with are retirees, they're white retirees that reflect only a certain part of the population and community that lives in that watershed group. And then, I don't think it's for lack of interest, but I don't think they have the skill set or the knowledge on how to do a better job of engaging with folks of different race, of different age groups, different cultures, all that kind of stuff, and so that's not necessarily something that they're strong at."

"Our leadership team is mainly made up of retirees, and I would say, yeah, getting younger voices, having more diversity, making sure that we're listening to everyone. That's something I feel like is missing in our group, especially, is that we are very much viewing it from this one perspective of mainly older white people in the community, who have a lot of knowledge and experience, and I think that that's wonderful, but may not be capturing everybody's needs."

"I think diversity, as well. When we get in a room with a lot of agency folks, and I mean diversity not only in the people but in their background. So when we get in the room with a lot of these agency folks, this can be their first time seeing a watershed from the political or regulatory restrictions or the goals that are established by each of our respective agencies, and we fail to see it from the public's point of view. And I think that when you have a watershed group that is advocating for it, it may be a group of constituents that don't have the same background as some of the regulatory providers, you get Ann who owns a hardware store or Joe who is a kindergarten teacher or Maurice who is a business owner in the community, and so they have a different perspective about what are the goals and measurements of success for what a watershed plan might be and how they interact with it on a day-to-day basis. And without that support from a watershed group, we're only going to be looking at it from a regulatory framework, so I think that diversity of backgrounds is critical to success of a group in being able to engage and educate and excite people into taking up the flag and protecting our watershed or implementing some best management practices or making significant improvements to water quality."

Need more volunteers

In addition to increasing memberships, watershed groups also need more volunteers to help with specific projects. While many watershed group members themselves are volunteers, in this case, they are looking for people to make a shorter-term commitment to assist with water quality monitoring, stewardship, and other projects. Diversity of volunteers is also a challenge.

"Well, one way I think is we need volunteers to do things... So the volunteering connects to the community."

"I guess in my image, it's more utilitarian. I just want water volunteers. If they happen to group up based on where they live or the watershed that they exist in that they care about or whatever that's OK, but it's mostly just having this motivated or interested group that wants to do things, and having access to that."

"Your typical volunteers were my typical volunteers. There were upper middle class white people who had flexibility of working from home on certain days and so they could just take off on a Wednesday and volunteer with me and then work on Saturday instead for their hours. Or they were retired or, so I was keenly aware that I wasn't reaching a whole demographic or a lot of demographics. But I was working with friends of groups and so I wasn't recruiting the volunteers, I was just running the program that they participated in. But that's really what I focused on... how do you do better outreach to reach those communities."

Challenge of working with volunteers

The majority of watershed groups rely on volunteer members to get work done and managing volunteers can be a challenge. It is difficult to keep the work sustainable over time and manage both a large workload and limited accountability. Older volunteers may struggle with technology, and younger people may not be in a position to volunteer their time without compensation. Volunteer groups may lack consistency, as people cycle in and out depending on their other commitments. They may also lack the skills or discipline to run a higher-capacity organization and manage larger projects like grants.

"When you ask anybody to volunteer their time, that's a big ask. I've worked for nonprofit groups that are looking for funders to put up some real cash to help with organizations, and to me that is – I have an easy ask, that's just, take out your checkbook. But boy, you ask somebody to drive in a snow storm to a meeting and all I can do is bring you cupcakes and cookies and ask you to sit there for two to three hours and then drive home in that same snow storm, that's a big ask. People got kids and it's a school day tomorrow and they've got to take their kids to the bus stop. I think volunteering is one of the most incredible gifts anybody can give to a nonprofit group."

"I think the idea of volunteering has to be subsidized. It is not realistic for young people to be expected to coordinate meetings. Or for there even to be a system in place that rotates coordinators. That takes a huge amount of good organizing. To get to the point where you can spread the workload out. That's later, right? We need to invest in volunteers. Because right now what I have noticed is that it is everyone that is over 60 who have a lot of knowledge but aren't really—may or may not be savvy in organization or coordinating. Or even know what tools to use... Because, in terms of volunteers, all of the people [involved in a different project] are over 60, and I brought up Slack as a tool and it freaked them out! What the hell?! Slack?! They'd rather send 6,000 emails! So, we need the young and the old. And to be engaged, the young people need money to survive. And to carve out time in the midst of doing too many things anyway. To bring forward the tools and the expertise and knowledge of modern times to these big fights and issues, to get them excited about working on these issues. So, I am a huge

advocate for programs to be created to help volunteer groups, citizen groups, what have you, to apply for funding to hire people to help coordinate. And then [larger nonprofit organizations] can be a member as a technical advisor. Doing what we should be doing. More high-level stuff. Navigating. Knowing what the state is doing. Bringing that down and making sure the public gets it. But if I am on the ground, I can't also be at the 30,000 feet. So, I need help. I can tell you to hire young people who can do what I am doing. They just can't do it for free in their communities."

"And you know they're just not always there. It is just not a consistent effort. And that's something that I guess is one of the weakest things about any volunteer group. It's not consistent. And you get a dedicated group of four or five individuals or communities that, you know, are really working hard because they have problems they gotta solve. And this is a good way to do it. And others that just kinda look at it as far down on the priority list."

"Because, you know, with volunteers, you can't be too hard on them if they don't follow up, because they're being nice to even come to the meetings. But when you do have volunteers, sometimes they only volunteer to come to the meeting and not really do anything in between, and so it's hard to find people who will do something in between."

"The discipline of our volunteers is the main barrier. And it's a serious undertaking, you know, it can be complicated. Especially with the Consolidated Funding Application portal, is difficult - there's a barrier to education there. People are just not comfortable with how to apply physically for a grant... It's a big project on its own and bigger than putting on [an event]... Because then, you got to follow through, after you get the grant, and that's again, volunteer discipline. Can you file, can you meet those deadlines? And that's where a paid staffer comes in handy. Someone who's already, you know, under deadlines. If someone is paid to pay attention to the deadlines."

Watershed groups that are themselves nonprofits have volunteer boards of directors. Managing nonprofit boards represents an additional challenge, as they also struggle with capacity and accountability.

"Capacity is a huge one... there are things out there for board training and I try to encourage them to do that. But as you know, boards tend to – so, I try to find projects that a certain person on the board likes, to give them the full responsibility. Someone suggested committees last year and we had a committee [for a particular project], the person who suggested the committee never did anything [laughter]. I ended up doing everything, and I try to say here's the list, can you do it? It never happened. But now we have a couple of new board members and... we're trying the committee structure again and we'll see how that plays out... Someone told me that you should have a small board when you have a small organization. But somebody else told me it's good to have a big board, because they need to do the work, because you don't have the funds or the capacity. You can't do everything. And so that's what I'm trying to tell the board, that I have this to-do list and I absolutely cannot get through it all. So, we will see, that's one of the issues... Board members should be [invested] as well but it's too easy for them to say, okay

I'm just tired now, I have to move on. I have this other crisis, I can't take it, I have too much going on... So, I'd like to see – if that's what we all agree to do, it gets done. Not that we all agree to do it, and then I do it. That's often what happens. I try to do action points at the end of the board meeting and hold people accountable to what they promise to do and they have to report on that at the next board meeting. We were doing that, and that makes a little difference because they know they have to show up at a board meeting and do it. And try to make them feel good about it, that's a challenge for me. I'm supposed to be managing, and you really do have to manage your board, because if you piss them off – and yet I had a board member who was a CPA, she was the treasurer. She was very good in terms of setting up some of those things, but I felt we were coddling her, or I was coddling her more to listen to the drama of her life than just – I just want the work done. Or getting board members to actually step up to the plate for financial donations, that's a big thing. ...I'm hopeful that we will have 100% board participation this year... And we've had discussions about it. 'Well, you can't expect me to give money' and it's like, yeah, we can, that's a big part of it. I know you give your time, but that's not it, either you put the money in or you put somebody else's money in. So that's a challenge. They think they give time and they don't have to give money."

Need for staff or staff support

Several interview participants cited the need for paid staff to support watershed work specifically, whether as staff of the watershed group itself or as staff support employed by another organization or agency. Having a designated person paid to do watershed work would allow watershed groups to scale up their projects, build relationships, better achieve their mission, and cover more administrative tasks that are challenging for volunteers.

"To accomplish some of those big picture things that I just talked about, it would probably take some degree of paid staff or paid people, even on a temporary or part time basis. We'd have to be paying, because that can't be all volunteer work. But for the volunteers, we could do a whole lot more... if we had more volunteers... A liaison for some special projects, for example... we need somebody to be able to coordinate that... [M]y plan is to be able to have lots of people out there in this project, and then to take the information that they generate and be able to present it to the municipality in a way that shows them what areas might be particularly sensitive in the watershed that they need to be more protective of, because of that. That's one big goal that we haven't been able to get to yet, because we haven't had the person or people to put the time into doing that."

"If they had a full-time person. Or even a part-time person. [They would do] the things I can't get to, probably. You know, just making more calls and doing presentations at municipal halls, you know, or town board meetings or... meetings to give an update on what they've been working on, and to solicit involvement. But just to give updates and, you know, maintain a web presence. I don't think, well, there wouldn't be a lack of things to do."

"Again, it is going to have to find its way with a coordinator. We are going to apply for a grant again this year, well, for the first time. Hopefully successfully, in getting that this year. Just, not

having a coordinator is delaying the work they could be doing in taking on more of the recommendations of the scorecard. Which are so important, and there's so much to do. That's sensible, but you really need someone that can focus all their energy to kind of really push them forward with the foundational stuff... Things that are kind of simple, but they are significant."

A focus group participant articulated the impact of transitioning from an all-volunteer group to having even one staff person.

"So many of the watershed groups are volunteer groups, and if they are lucky, they have a part-time staff member to try and move things forward, and I don't know how much of that is financial and how much of that is structural. So, my experience with volunteer organizations, and I'm on a couple on a couple of boards that are essentially run by the boards, is that it's really hard. Because when you're not paid to do a job, you think you have rights and authority to make decisions because you're volunteering your time, goddamnit, you're going to, you know, set the agenda, right? And when you have a structure of even one staff member who has a responsibility for effectively implementing a program, it changes the dynamic. So, I think for these groups to consider having a staff member, even a part time staff member, and having the resources to pay that staff member, is hugely valuable."

For groups that currently have staff or staff support, it can be hard for them to carve out time to work on watershed issues, with all of their other job responsibilities. There is also a need to increase staff for watershed groups that currently have staff support.

"[A]s a small [organization], I just don't have the capacity to be reaching all of this. This [watershed work] alone is enough for someone to do... But we've got many more things going on at the same time. And so, it's really hard, without some dedicated staff, to be able to really do what I'd like to do... It's not even just staff, it's the right staff. You need people who can effectively work and address problems in a focused way... But I think capacity is a really big issue... And while we do many things and I'm happy and proud of what we do, it's hard to let go of the things that you can't get to... You need to be a multi-tasker generalist, or you can have some part-time help. Like, having this person help some hours a week on water, she was excellent. So that made it easy to do. But I'm looking for people who can do some substantive things in an excellent way, and then framing up a little bit to be out there talking to people more. But I don't want a fundraising department for us. But it's an important challenge of our organization. I want the focus to be on the mission, and so how do you focus on the mission, but you still have administrative tasks. I think it's just another really competent person to help on whatever's coming up the pipe."

"If you're a one-person team, then in order to get that press release out in time to make the papers or the deadline, you're choosing not to write the grant, or something like that. So, a division of labor, I don't know how you resource that, but it would be helpful. And maybe that's the board. Maybe someone, they only do press releases... Growing the organization from a volunteer to a fully staffed – and I think staff is important because then people are accountable. I hate to say that, and personally, did I need the money? No, but I wanted the work to be valued

– I'm not doing this for the money, I can tell you that. But I wanted it to be valued. And if it wasn't valued, it wasn't part of building a sustainable organization."

"I guess it's the time thing, which is what that coordinator could help with. So yeah, just like everyone's got their own focus and their own job, and watershed work is just 30% of what I do, and this is even a smaller percentage of that."

"And capacity, making sure we can transition this organization to the next board and the next staff, and we increase the staff."

Interview participants shared a few specific needs for staff to overcome the barriers of limited capacity. These include a full-time executive director, assistance with outreach and communication, administrative support, someone with strong coordination skills, and someone with technical knowledge. Certain roles are better suited for hiring someone, rather than asking a volunteer. While funding is a barrier for hiring staff, several interview participants mentioned that managing the logistics of hiring the right person was the real challenge.

"What I'd like to see is that we are able to have enough money and fundraise enough money to hire a real going rate for a full-time executive director. I think we do need an outreach person. I do a lot of the outreach but like a newsletter, I cannot keep up Facebook, Instagram, emails, governance. I would like to find a social media – I would love to find that young, snappy person who loves to take pictures and throw things on Facebook because I don't like to do it. So that's a capacity issue."

"Somehow, if we could get people or earmarked funding so that we could hire administrative staff like a bookkeeper, maybe even a development person, or someone who wears both of those hats, that kind of thing would be fantastic. But in addition, sharing of resources among other like-minded groups."

"A coordinator is a steward. It's not like you are making decisions, you are just helping to move the ball. Or move the process. We need more stewards who can do that. Yeah, because there is plenty of money out there, in a way. If you can figure out how to frame what it is that you need, you are going to get money for it. I don't think that is the issue. It's just the coordination. It is really tough and there are just not enough people who can do it. That's important."

"There is that need for technical support, whether it's a coordinator, it's a leader, coordinator, but also support services... the strength of the earlier organization was the technical expertise we brought in. So that it wasn't political, it was science... I've discovered that the more technical knowledge the coordinator has, the better."

A focus group participant described the need to have staff to manage outreach, with continuity.

"Just having some person who is responsible for the public outreach and who is continuous would be really helpful... [I]t's really embarrassing me right now to see that this website, which

we used to have all kinds of great information on and actually housed our data, where people could download the data, has been taken over by someone else who is using it to post scam stuff. And if we had had a person who was kind of dedicated to keeping this thing going all along, that never would have happened. ...[W]e had this model for a long time, where we had somebody... who was a post-bac position, but that person lasted for a year and the overlap between the post-bacs was maybe a couple of weeks, as one was going the other was coming in. And that's just not the continuity that's needed to keep a web presence going and/or get involved in the community in a sustained way with stakeholder engagement."

Despite the need for staff, having staff support can also change the power dynamic of an all-volunteer group in a challenging way. One interview participant that provides staff support to a watershed group explained:

"We're working on how to be sustainable, as a group. It's obviously not in their best interest to have an organization running them. It's a citizen group, it should be run by citizens. It's a trick to figure out how to do that. It's also important though to let things change and eb and flow. It may or may not be successful in the long run."

Municipal members

Many watershed groups develop partnerships with municipalities. Some include municipalities specifically as members; this is especially true of watershed groups that are structured as inter-municipal councils. The limited capacity of municipalities is a challenge for them to participate as members and to inform their constituents about the watershed group.

"Again, it's volunteer time, so these are municipal officials that have their plates already full. That's kind of one of the downfalls of the organizational scheme of an intermunicipal council is that it relies on – not saying that other volunteers aren't busy, I'm sure they are. But the municipal officials who represent the [watershed group] have their plates already pretty full, so it's finding people who care about the issues to go above and beyond and step into that role."

"And probably one of the weaknesses of the group is the fact that, you know, it's up to each community to be able to then send out messages about when the meetings are happening, where they are happening, and remind the public that they are welcome to sit in. And even if they are not allowed to vote, they can pretty much hear information and do different things to help."

One interview participant noted that municipalities won't get involved until there is a crisis. It had been a challenge for this group to grow participation from municipalities, as they didn't have the same concerns as more active municipal members.

"And as I said, for the longest time, we had a really difficult time trying to get people in the upper part of the watershed group to come to meetings... because they did not seem to have some of the same problems. It wasn't a high priority. And, you know, going to some of the town

meetings and different things, that's changed, and now we're getting a little more participation from people in the upper half, because things are changing county-wide. Development in the upper part of the watershed is increasing, and not at a super-fast rate, but more than it ever has before. So a good example... they suddenly have a developer come in and say, 'Well, we want to put up 625 housing units in [a rural] area.' And when the process actually got started with their planning and building department, up until then they were like a sleepy little community that didn't see any reason why they had to come to these meetings. They couldn't get volunteers to come. But now that they've got a proposal to put up that could potentially double the population in the town in the space of a few years. Suddenly it's like, 'Well, what about the water? What about the sewer?' Now we're getting a lot of participation from them. But it took that kind of change to be in their local community to be able to warrant them suddenly looking for help or advice on how to approach certain things. And that's how a lot of municipalities are. They know that things are important but it's not always done on a crisis basis, but a lot of things are going to be put to a lower level until something happens to change it that's unexpected."

Having a group with a mix of municipal elected officials, municipal appointed board members, and community members, can also be a challenge for coordination.

"I mean, personalities are what they are, which is usually the way it is in a group that has mixed levels of municipal... You have town board members, ECC. I kind of like, I like having both. Having that range is interesting but it can, it can be, you know, a challenge for a coordinator to really stay professional, and above it all and just keep it moving."

Group Organization and Structure

Lack of information for groups getting started

Watershed groups that are getting started need information on how to organize, including structure and support.

"The difficulty for me came from lack of scientific experience and technical expertise that you need in being a watershed coordinator, or not exactly knowing where to go to look for it. There was some guidance that I could have used back then that wasn't available. Maybe because the whole watershed concept was fairly new in our area. The guidance that I was given was to acquire the EPA book, which is sitting there on the shelf [laughter], that huge binder of all things watershed. And that in itself is daunting to go through, coming up with a design study. I didn't know anything about a design study for watershed work. There's a lot of resources out there, but they're just all over the place. It became frustrating sometimes to go to what you thought was the natural place to go for information, like the DEC's water group, and then you contact them and then they refer you to someone else and someone else. There's all these layers, and that became very frustrating as far as how many phone calls or emails or whatever to get to the right unit or person to ask your question. So, in some ways that caused some frustration and you have to have a lot of perseverance when you're trying to seek out information, and just keep at it."

"I think that there could be some form of a task list for a newly formed watershed group that, this is what we've seen work in other places. This might work for you, it might not, but at least this is some framework to look at."

Starting a watershed group is challenging in a variety of ways. One interview participant described a stakeholder who felt that watershed work was a waste of money, but was able to overcome that barrier by building connections between people.

"Well first of all, we were trying to get a group together. We were trying to establish a group of individuals, municipalities, businesses, whoever, to actually become part of our watershed alliance. I had an advisory committee, and I had some very talented people on my advisory committee to give an assist with helping to spread the word, creating maps, and getting this thing started... There's some politics that I had to try to overcome or deal with or side step, whatever was the appropriate action to take. We had the haters and we had the people who were on our side, so it was just something that you had to continue to persevere. I remember one time I had somebody who was very vocal... and he was very adamant about money being given to watershed work, thinking there were better things for the State of New York to be funding. That's the kind of person that you try to get them to come around, and I did get that person to come around, and you know what did it? It was the fact that I worked with kids. That person thought that my working with kids was outstanding, that was a real plus... And that was fine by me... Because now I have that connection to you, and I can help that person understand that, yeah, I do work with kids and I bring them to the creek and I bring them to the water. And I can connect the kids to the watershed, and that's maybe going to help me with the barrier that was between me and this person who thought the funding was wasted money."

A focus group participant mentioned a barrier was a lack of time to support starting new watershed groups. While there may be interest in starting a group, this person lacked capacity to support them, and it wasn't clear if they had another place to point them for support.

"I'm just reading [the question] 'what role does your group play to support watershed groups,' and I'd say, not much right now. I mean, being very truthful, I think there is attentiveness to people who volunteer the last time we did WAVE, and they'll say things like, 'Oh we should form a watershed group,' which point I get really nervous and go, 'Oh God I don't know how I can help you with that,' but I mostly because I know what's involved and it would be pretty time consuming."

Developing a structure/organizing

Several interview participants spoke to the need for developing an organizational structure for their watershed groups. They need guidance, support, and time to develop bylaws, formalize roles, and create a more sustainable organization.

“...[W]e don’t have the next level of organizational structure set up. So if we can’t do that and figure out a way to bring in some money – yeah.”

“We still need a lot of time and support to build a framework for our operation that is more stable and can start to bring more people in... I think that the easiest thing to say is, right now, is some level of formalizing the roles we have been playing. And creating more clear parameters around – OK and this is the amount of time that you can, or expected. You can count on having a certain amount of income so that you can make sure that you are setting aside this time to do this role. So, roles....”

“If we're going to get anything or do anything, we can't just be our own little islands anymore. We need to organize. And it's tough to organize, it's tough to organize people. It's tough to become a 501(c)(3). There's a lot of paperwork that goes along with that.”

Not having a defined structure through bylaw or intermunicipal structure can become a weakness, especially when there are different perspectives or conflicts that arise.

“It was exciting. It was fun, you know. The stupid part was we didn't have an IMA [inter-municipal agreement] and we didn't incorporate and we didn't have bylaws... I didn't know, I thought I heard... you just need to have an inter-municipal gathering. It doesn't have to be incorporated, doesn't have to be so formal. I showed my lack of experience. So now I know.”

Watershed groups need structure, but one that is flexible enough to allow for new ideas. It can be a challenge to strike that balance.

“I’m always torn between how structured you want something, versus allowing people to bring in ideas. So, you always think about the structure versus flexibility. I think you need a bare bones structure. As an example, I think [one watershed group] does quite well with a relatively unstructured environment. But my experience is [that group’s leader] ran meetings pretty well. But he allowed a lot of freedom for ideas to come up and people to pursue their interest. I think one of the goals is for it to become a little more structured so you have more regular meetings, 90 minutes, you can do follow ups a lot better... But I think we need some structure and some officers or something.”

Having a clearer structure in place would help delegate work to watershed group members, volunteers, and other stakeholders, to make sure everyone is working together efficiently. Without this, a watershed group may not be able to engage people in the way that they need to achieve their goals.

“Part of our problem right now is that most of us that are holding... so many of the big pieces, and then a lot of people want to be involved, but they want to be given one small little task. They want to know what to do. And sometimes just getting to that point of being able to give someone that one small thing to do, so much needs to be in place, and the structure of the group needs to be in place to be very clear, because people – when we were bringing people in

really early on and we still didn't know what the structure was, it would be too much for them. They don't want to be part of forming a group, they just want to volunteer and be told what to do... And really, I feel like that is one of our biggest pieces of work this year, is what do we need to do from the inside that will actually allow us to be a group that can pull more people. That can allow all the people who want to be involved in the manner, and to the extent that they want to be involved, to be involved. That's one of our biggest questions right now, and the challenges there have to do with time and resources."

"So what we were going to do this fall is we were going to start the more focused organization of the group. This is a complicated discussion and it is a partnership with [a regional nonprofit] ... We started the discussions this fall about what's involved in actually making the meeting happen and then what's the objective of the watershed alliance. And we haven't gotten past that point... [I]t's clear that we need more citizen advocates, and we need more clean water advocates, and we need more advocates for the river... And so what we need to do is, we need to recruit and bring in more stakeholders that are sort of user-related. And we're not there... So we need the kayakers and the canoers and the boaters and the breweries and the local municipal managers who are taking water. We need that cohort, and that's not the science-y cohort that tends to be who we're primarily talking to at the symposium."

One interview participant that also works at a regional scale described the challenge of engaging with another watershed group, when they don't have a specific focus and are working on organizational structure. This could be a barrier to developing partnerships or collaborating with experts.

"I go to too many [watershed group] meetings where people just talk about stuff and don't really do it. I'd like to think if they get involved in something that our expertise can help with, that we'll be aware of that and we'll get involved. Right now, I feel like they're going through a lot of growing pains in terms of how they want the organization structured and what they want to focus on. And we're aware of what they're doing and willing to help them, but kinda waiting to see where we maybe could best fit in within our expertise."

Several focus group participants identified the need for watershed groups to have organizational development support, including an organizational audit or assessment. Both new and existing groups could benefit from someone with that expertise.

"...organizational intelligence. And I just was thinking if there's some way to provide, and I have no idea how, but an organizational audit or help with setting up a new – because a lot of these groups already exist, but maybe are, you know, not doing so well right now, or really doing well but could take a little bit of a push to be even better, so some sort of way to help those groups kind of self-assess or bring somebody else in, just do a quick, here are the things that your group is doing well and might need."

"...they need some org development side of things. They have the passion, but don't have people who have run nonprofits, or they want to do a big cleanup but then there are insurances and

administrations and a bunch of other stuff that needs to be built in that an incorporated volunteer group can't always do. So they need a physical manager or physical funds or another type of org structure."

Managing conflict

Managing conflict within the watershed group can be a challenge, especially with a lack of leadership and/or organizational structure. This includes handling disruptive people and internal politics, as well as deciding next steps for actions. In one case with a disruptive person, the issue was resolved when the person stopped coming, but not because the group actively managed the conflict.

"Disruptive people, people who intentionally want to disrupt your meeting... The meetings were getting lighter and lighter when this person was still coming to the meetings, because who wants to go to a meeting where there's going to be conflict? And, senseless arguing, but, now that the one individual, and hopefully we don't get another, isn't coming, it's like everyone is kind of on the same page who comes to the meetings."

"There's some politics that I had to try to overcome or deal with or side step, whatever was the appropriate action to take. We had the haters and we had the people who were on our side, so it was just something that you had to continue to persevere."

A lack of agreement between watershed group members on next steps and reluctance to take action can keep the group from accomplishing their goals.

"Well, they're individual fears. I can cite two examples from my group. One, he wants to look very professional, he doesn't want to ask for something that he thinks doesn't make sense. That's not my concern. He's got a science background, so naturally he wants to understand the science portion of it very well... You know, he doesn't want to make a mistake. I say, okay this is just the first time. Let's just open up the dialogue and not worry about if we are getting the right 'ask'. The other one wants to make sure he understands the issue so completely that it is almost like a road block... Well, the current barrier I see is just some individuals being almost obstructive. But I'm dealing with that. I'm the chair and I have to deal with that so I'm not saying too much. I'm saying, 'Okay we will postpone the meeting and we'll talk about it some more.' It's only one month to the next."

Building a group's collective identity

It can be a challenge to build an identity for the watershed group, separate from individuals or other organizations, agencies, or institutions that participate in the group.

One interview participant described the challenge of a staff support person distinguishing themselves from the group and reinforcing an individual rather than a collective identity.

"It's kind of like, I think it's still for the most part, it's up to me. And so then, I have to figure out how much I can really do. I mean, it's not entirely up to me but there's somebody who's always the driving force. [Staff support person] is great at, 'Okay [name], we need to do the agenda, da da da,' but up until two meetings ago, she was still calling us 'you.' And then the person who called her out said 'you' even though he's been in the group. And then we had to call him out, so there's still that big sense of real ownership that it's all us, not just a me or a [name] or a [name]."

It can be challenging to determine the specific role of the watershed group, especially when a group is made up of well-known organizations that have their own roles and priorities.

"I don't think our watershed group is perceived at all right now. I don't think people are familiar with [the group] because at the community events we are present as our own separate organizations, and I think that's how people know us... I would say for the average resident, they wouldn't recognize the name. But we have our 30 partner organizations, so I think we are known among certain businesses and nonprofits, and of course the [municipality]."

"We're not super out and about as a [watershed group]. We're not sitting at tables at county fairs, or any of that kind of stuff. It's more of, so we get together once a month, and it's more of a like, here's what we're doing or here's an issue I'm having. Is this an issue for everybody? Oh, it is. OK, well, how can we address that? ...I think that if you were to, say, walk into a town and say [the name of the watershed group], people would have no idea who we were. But if you were to walk in and say, [the names of organizations and agencies that are members of the watershed group]? Oh, they're great. They helped us with this. So, individually as entities, we all have really good reputations in the community. But I wouldn't say that people would know who the [watershed group] was. And we are fairly new when it comes to that. And we don't do public education and outreach, that's not really our focus. So, we're not as, I guess, out in the communities as maybe we could or should be."

A watershed group could be a structure through which people and groups collaborate, rather than its own entity. In that case, the watershed group serves as a coalition of other organizations that are helping each other meet shared goals that have already been identified in their respective organizations. Two different focus group participants that are involved with watershed groups explained:

"I think understanding our role has been a tricky process. There's a lot of different, I'd say like, organizational mandates and expectations from each of the different groups involved, and so understanding what as a [watershed group] we're aiming to do is a pretty tricky thing. And also finding buy-in from everyone is also tricky when we're not, you know, we're not an entity funded onto ourselves... What the role of the [watershed group] is I think is constantly changing, I feel like, but at least we're doing something and we're moving ahead, and we're trying to figure out what exactly we best can do as a group."

"I think we think of ourselves as a coalition, in that we're not an organization trying to create our own staff on our own entities or, be them paid or volunteer, we're really just trying to help each other each with our own agendas, altogether support a greater effort to improve the... watershed. And I think that's important, at least for the way that we function, because it allows each of us to know what our roles are and what our different funding sources and our jobs and our entities are paying us to do, and then we just keep each other informed of what those are, and then try to find any synergistic activities we can anywhere throughout the watershed and then support each other in those efforts. So it's more about communicating and then helping each other be involved in the activities that each of us individually as different members of this coalition are deciding to undertake."

Watershed groups that have a fiscal sponsor or are housed within a larger entity may need a clearly defined structure so that they can act separately when need be. Two interview participants from academic institutions discussed the challenges and opportunities that come with watershed group-academic partnerships. At an organizational level, an academic institution comes with significant bureaucracy and logistical hurdles.

"But I think a challenge and one future thing that we need to be thinking through is to keep the [watershed group] so that it can advocate, but that is going to be separate from [the college] ... [We would advocate for] water quality bills. Yeah, state. It's state and federal level."

"[T]here is some institutional infrastructure that needs to be in place... [Academic institution] is a bureaucracy... [I]n my perfect world, I would love to see the [watershed group] driven by a simultaneous mission of something coming out of our department..."

Challenge of becoming a nonprofit

Becoming a 501(c)(3) is a logistically complicated process that can be a substantial barrier for watershed groups. Operating a nonprofit once it is established is also complex, especially for volunteer groups that have limited capacity.

"Actually, more important than funding is a way to have funding without becoming another nonprofit, which I try to discourage. To run a not-for-profit is like a whole other thing that some people don't realize. So, I think the challenge how do you get donations and how do you write for grants or apply – you need a fiscal sponsor... Like a course on how to function as a citizen group and collect donations would be so helpful because people don't understand it. So those are pretty severe threats."

"The advisory committee, we did talk about, 'How about it's time to become a nonprofit...?' And back then it was like, 'Well, now I have to manage a nonprofit on top of managing my own business?' I thought to myself, well, maybe down the road somewhere, I'd think about becoming a nonprofit for the group, and handling that aspect of it, but it just never happened. And I just didn't feel that that was the right move for me to make. And then I often thought about, and I think I actually talked to you one time about finding a person to take over this

watershed assignment. Is there somebody that is willing to look into developing a nonprofit group and going through the whole 501(c)(3) process and managing that? And then it just never came to any fruition about that happening. But I think had I gone the route of making it a nonprofit, maybe that should have happened? I don't know."

"There's another interesting thing that happened, in that there was another, kind of, [watershed] group that had been around much longer, but had not really done anything for a while. And they were pretty eager to remain alive and wanted us to merge with them. But they were a 501(c)(3)... And they kept coming to people in our group individually and saying, 'You should merge with us.' And I fought that, and it took a lot of energy. And I fought it, because they have tax reporting responsibilities. They are a different animal. We could barely get an email out, you know... [Their focus was] to get funding.... If you're applying for funding, you're much stronger if you're applying as a community group as opposed to a bunch of individuals. So, when they incorporated – they were lawyers who knew how to do all the stuff – and they incorporated and became a 501(c)(3). They could apply for grants... They wanted us, basically, to take on their identity. And I took out our mission and our goals and I was like, 'Here's ours.' And I took out theirs and I said, 'Here's theirs.' And I said, 'Are they the same?' 'Well, no.' And, 'Look at all the responsibilities if we become them. Does anybody want to do this?' 'Well, no.' And then we'd talk about it for like an hour. And then it would come up again in the next meeting! You know what I mean!? And it happened over and over again. And for a while I just started to feel like the bad guy. I kept saying no, no, no."

At the same time, becoming a 501(c)(3) and being able to secure their own grants can give watershed groups confidence and autonomy. A focus group participant expressed:

"I think that watershed groups need to be able to get their own funding and not have to go through other institutions. They need access to 501(c)(3). They need to have autonomy to a certain extent. And you know, there are many ways to do that, but I do think that could be really helpful, too, and allowing watershed leaders to feel like they actually do have the capacity to move things forward under their own local."

Identifying a fiscal sponsor

Instead of becoming a 501(c)(3) nonprofit, watershed groups may need a fiscal sponsor to connect to grants and other funding. This requires a certain amount of structure to develop these partnerships. Fiscal sponsors could include a municipality or a nonprofit organization, and there are challenges to both, in maintaining relationships during turnover and ensuring that missions are aligned.

"And then, kind of losing [the municipality] as our fiscal sponsor. I'm not positive if we lost them or not, that's a little in the gray area for me right now. Well yeah, as it turned out they didn't provide even any liability insurance. [Another municipality that was a fiscal sponsor in the past] used to. So [a regional organization] provided the liability insurance for our public events."

"I think funding streams are so embedded in very official institutions that can manage the money, such as being a county government or water authority or local government, so you're forced, if you want to spend things, oftentimes to move to those entities, which have the administrative capacity to do it, or the name lead applicant. So you're kind of stuck moving and engaging with that kind of group."

Managing meetings

Managing watershed group meetings is a challenge, with limited time and capacity of volunteers and staff alike. This relates to the number of meetings, as well as setting an agenda, running the meeting, and moving work forward. Finding the right physical locations for regular meetings can also be a challenge.

"The pushback I got from the board is that everyone is pretty sick of meetings. Everyone I asked to be on the board did not want meetings, so we have to have a couple, per corporate law. But the board mostly does things by email group conversations."

"We don't get to them a lot. To tell you the truth, these days I have so much to do that I have to really pick and choose which meetings I go to because if I don't have time... To me, going to a meeting for the sake of going to a meeting isn't getting anything done unless you're going to go there and talk about what you're going to do and then go home and do it. And I go to too many meetings where people just talk about stuff and don't really do it."

"We need places to have events, we need speakers, our two yearly meetings are really hard. And I would have thought by now that it would be more on autopilot, but they're not... Yeah, the physical venue, we also need speakers. We have thought, but it's been a challenge every time."

Two focus group participants felt that effective meeting management and group organizing is a challenge, especially for volunteer watershed groups.

"When you have folks who have a certain skill set, which then can structure and guide the group, that can be a really important thing. So, this is like things like how to hold a good meeting, how to know how to do a proper agenda, how to formally and informally assess power, you know things about kind of – they're kind of social and political. Being able to read the landscape, being able to build momentum, you know low hanging fruit, building momentum, all those kinds of things for like organizational and kind of social intelligence in that setting. So, when folks have that, it almost doesn't matter what issue they're working on, they can steer a group there, so that's one, and that's a whole another skill set... because then they're better able to integrate and be like, oh, we don't reflect the community and what could we do to be more, you know have better participation in our group."

"Thank goodness for [a staff coordinator for a watershed group]... [T]hat group never, I don't think, on their own could have continued to meet the goals of what they were working on..."

because you're not gonna be able to retain volunteers if you feel like you're getting on a 2 hour Zoom call that could have been accomplished in 30 minutes."

Administration and operations

Watershed groups need administrative support to maintain their operations, including data entry, grant-writing, information technology, bookkeeping, and human resources.

"Yes, some of those technical skills [are lacking]. The database and the entry and the grant-writing. Because you're a small organization, so when the woman who helps me write thank you letters to everybody or tries to get a photo into another – she doesn't have anybody. Like when I was working [a corporate job], you could ask, you could call your IT people. You get somebody, 'Oh how do you do that little trick? How do you upload a photo from your phone to Instagram? And then put it on Facebook, but make sure it gets on the [watershed group]'s Facebook.' Something like that. Those type of silly little technical skills are challenging for when you don't have other people all the time at your disposal to ask for. Right? Who do you go to? It's tricky."

"So, our treasurer was away... and we had a kind of like a contract to pay a website designer for 4 hours of work. And she was so excited about promoting the [watershed] and the cleanup that was about to happen, that she did 10 and a quarter hours of work. I said, 'I'm the chair now, I'm going to pay her out of our own pocket,' because I want to keep her drive going. I don't want her to quit right before our clean up. But she did her 10 and a quarter hours, and then we had our clean up and she promoted the cleanup, and then I got hell for spending my own money, thinking that I might get reimbursed. So, the contract so to speak was for \$200, and I said, well I know I will get reimbursed for that. But I stepped outside of the boundaries of clear bookkeeping somehow, and the treasurer got very angry with me at a meeting. I kept my tongue and said I was sorry twice. But, I wanted to get the idea that initiative is going to happen whether people like it or not. If I have to bend the rules of strict bookkeeping or 501(c)(3) accounting abilities, I am going to do that. I maybe won't do it the same way, but I'm going to push the boundaries here a little bit, because all watersheds need to push the boundaries. That's the way I feel, and especially thinking about working with government or somebody else. We need to push the boundaries, we need to get them invested."

Implementation projects require even more administrative capacity, including being in legal compliance with all requirements for liability, insurance, contracting, permits, and more. Having a more robust support system for understanding these issues would be valuable.

"Well if we go back to the liability just a little bit. Well, the paperwork requirements and the contractual kind of stuff. If you really cover all of your bases to try to make everybody happy, it's just unreal what the investment of time and effort before you can do anything... At some point, you just have to jump in and do it, otherwise you're never going to get anything done. So a real challenge is knowing what, where to make that balancing point. You want to get something done... I mean, my board oversees our money like it was their money, you know? They want to be really efficient, but they want to be helpful, too, and they want to get stuff done, so that's

not an impediment to me. What's more of an impediment is them wanting to get stuff done, and me trying to keep track of all the laws and regulations that I have to deal with in order to do it, and not get me and them in trouble. Prevailing wage, labor laws, did you have a contract, did he have the right insurance, on and on. And if you're doing this without lawyers, then you're really taking a chance. But the minute you start doing it with lawyers, then things slow down so much that it's just ridiculous. And I'm trying to negotiate a license agreement with a landowner to do the next phase of our [implementation project], and it moved from me negotiating directly with them to the negotiations taking place from me to the county attorney to the landowner's private attorney... So that's a real challenge, especially for a small office like this. We don't have a human resources department and an on-staff lawyer and all that other kind of stuff, so I'm trying to be a jack of all trades, and all I want to do is go out and build projects, but if I just do that, then we will implode in no time... It's the funding and having that be reliable and not competitive and soft, and maybe having a more robust support system in terms of some of this legal stuff. Like we got a letter from the IRS the other day that we're getting audited... so now we have to pay a private accounting firm just to protect ourselves. Not that we think we've done anything wrong, but once they come in and audit you, they're going to find something wrong... So that would be helpful if we had a robust system of where we could go."

Logistical challenges also include managing insurance as a small or volunteer organization.

"It was very challenging to figure out how to get it done, because as soon as it was not guerrilla style, like you know, let's all get in the car and get out there and see it, you come up with problems of insurance and now you have to ask for permission. That was a learning curve for us."

"What was really great about that is that they [a regional nonprofit] get insurance for the event, and so this is something that's been a frustration for me with our initiatives. Because we're too small, we can't get insurance for something as dangerous as taking kids into streams with slippery rocks and so forth. We tried but we couldn't do it, it was going to be prohibitively expensive."

Watersheds may lack public access points for recreation and water quality monitoring. Accessing rivers and streams on private property is also a challenge. Watershed groups may not have the information they need on how to obtain permission and insurance for a stream walk that includes private property.

"I don't know of any, you have to tramp through the woods. Which we do when we monitor, but then you have to be careful about not alerting somebody to the fact that you're on their property, which I think is pretty crazy."

"How, for instance, getting into the creek to monitor the whole creek, who do I go to? I've asked around and nobody can say they will just cover you. 'We have a blanket form right here, just sign this and you're set to go.' There's nobody that will give me that permission. I'm trying to

figure out how to get that permission. Maybe it's a conglomeration of different opinions. I don't think anybody is going to stick their neck out though, because they don't know."

"Well, it's because we were doing some macroinvertebrate screening, and somebody came out and said, 'What are you doing?' Kind of like she was taking ownership of the creek in that one spot. We said, 'We are doing this. We are the [watershed group], and we are testing for this.' She said okay. It had happened before when we had first started monitoring, we had to walk on somebody's lawn to get to the creek. They came out, and we'd explain. So, it's happened a few times. After, I don't know, about five or six years of monitoring on the [stream], I said, 'We need to get permission.' It's not so that we can tell people we are scientists. It's that I want to be able to look all the way from the headwaters to the source, or vice versa. I want to be able to take pictures and use my GPS unit. I bought a \$500 unit that I haven't used yet, a Garmin, because I have not figured out how to get permission. I want to be able to move through the whole creek and look for those illicit discharges, and look for something else, too. Study how maybe the creek is eroding this way because of something that is happening over here. Who's got landscaping equipment and fertilizers stored near the creek. Who has a factory, who is doing what to the creek, what could that be? Are they putting chemicals in, besides worrying about the bacteria? Is there something else going on? I really want access to monitor the creek, not just in 16 separate locations, but the whole creek."

Watershed groups need structures in place to enable resource sharing, including administrative resources. Given the size and capacity of watershed groups, they would benefit from shared access to insurance and equipment. There may be opportunities for groups that have more or different resources to work together.

"But in addition, sharing of resources among other like-minded groups. For instance, we talked briefly about the insurance problem and I brought this up actually a couple of times at the roundtables at the [Hudson River] Watershed Alliance, and I've gotten pretty good feedback about it. Somehow the idea of pooling resources to be able to get reasonably priced insurance for public events in waterways. Peopling streams. If we could somehow get some sort of a mechanism... Not only big public events, one day things like clean ups, which are a little easier to manage, but also long term... So, insurance, if we could somehow solve that problem jointly with a large number of watershed groups, that would be big. Scientific instrumentation... so many universities have a lot of instrumentation that, for the most part, collects dust. It might have been bought for a specific project and then the project ended and now it's sitting, and every university is the same. They have lots of stuff that's not really being used and it's just aging out."

"[A] lot of Soil and Water districts are better staffed than we are... but I think there's a lot of districts like us where you're small staff and you're trying to do a lot, and having better support system when things we're this come up, like getting audited or we need help getting a practical contract to use with our landowners and with our other contractors, we're just trying to do too much. That's kind of a barrier... [W]e were looking at some of the other groups like FLOWPA [Finger Lakes - Lake Ontario Watershed Protection Alliance] and Lake Champlain Coalition as

examples. They've been much more successful... FLOWPA has their own line in the EPF [Environmental Protection Fund], you know, and from what I understand, they have a nice mix of, it's not just Soil and Water Districts. The planning departments and other government entities and private entities are involved in that, so for some reason we haven't been able to get that going down here. The [Lower Hudson] Coalition's been – its main activity is the conference. For example, we've been talking about trying to get our own line in the EPF, and I've tried to jumpstart that with the Coalition a couple of times, and I actually had a couple of counties say, well, we don't know what we would do with the money, so they wouldn't oppose it, but they're like, we can't spend the money we've got already, which really makes me scratch my head. Yeah. So, that hasn't turned out to be as good a concept as I thought it would be in terms of sharing, collaborating and using that to access more money."

Access to Specific Skills

Whether through members or partners, watershed groups need access to specific skills. These can include more scientific or technical skills, like water quality monitoring, developing a Quality Assurance Project Plan (QAPP), Geographic Information Systems (GIS), stormwater, or understanding the State Environmental Quality Review Act (SEQRA) process. They can also include skills like leadership, grant-writing, lobbying, organizing, fundraising, creating a website, or design. While some groups are aware of and can articulate specific skills that are missing, others may not realize their needs. Many groups have skilled and technical volunteers or staff support, but may be lacking in certain key subject areas. Watershed group members themselves may not need to learn highly technical skills if they can connect to partners with that expertise.

"Technical skills, all of them."

"Yeah, [lacking technical skills,] I would definitely, I would say so."

"I am pretty new to the world of watershed restoration. I have a lot of stuff that I studied in school and I have experience in community engagement, which is a big part of that. But there is definitely a professional learning curve here."

"Well, yes, [the group lacks technical skills] even though we've got a number of professional people. And our learning on the sampling, you know, slope has been productive. Yeah, we don't have a real lot of technical people, and that's helpful in what the Hudson River Watershed Alliance is doing with some of the workshops and stuff, 'cause it is very helpful on that."

"...honestly, when I think about the people that are there now – the well-meaning people – who just don't have the training and those competencies. And many of them probably wouldn't accept that they don't... and they think what they do is right. Getting those people to really be introspective and understand what it takes to get these things done. I think that is a big deal."

On the other hand, having too many skilled watershed group members can come with its own challenges. They may have expert knowledge, but might not be interested in digging into the more hands-on work that is required. A focus group participant shared:

“In my experience, I feel like we have too many skills. Like people with too much expertise, and just not enough people that just want to go out there and clean up the trash or plant the trees... You want doers, you want people that can get out there and just do something.”

Technical, water quality, mapping skills

Several interview participants spoke to the need for access to GIS for creating maps, especially through partnerships with county agencies or academic institutions.

“We need GIS, cause you can't do that on our own. We don't have the technical skills or access to the software. And there were other things.”

“I think we have a lot of skills. I guess, in relation to looking for the intern that would help us compile data, there's sort of a scarcity of GIS seats among us. So we're trying to locate that, or even office space. I think we would really rely on that student or someone with expertise in GIS to do the mapping that we want to do. Or maybe, I don't know if there's specific software that was used to capture all this data and we might need to know how to do that.”

“So there was a really nice set of already created GIS maps, although they're becoming dated at this point. So that's one of the, actually that's probably going to be one of the recommendations is we could use some updating of those data... But you know, get those layers at the statewide level, but then you're working on clipping it and then trying to bring that data all back down anyway, so it's on both sides. It's manpower and technical expertise.”

A focus group participant also observed the need for access to GIS and other technical tools.

“...as long as you have the right tools in the watershed group: the mapping, the GIS data and so forth I think that they are very effective. But in some cases, I don't think that they have access to these tools, and I think that's when we get into the weakness part.”

Watershed groups also need technical skills around water quality monitoring.

“Yes [we are lacking technical skills]. I wouldn't know how to go out and water quality test. And what's a good water quality testing program that's going to be credible for the [watershed]? So you've got an unimpaired waterway, so we think. It doesn't seem to have a lot of industrial influences on it, so presumably it's in pretty good shape. But how do you test that?”

More broadly, watershed groups need access to scientific research and information to support their work. It is particularly helpful to have someone who can interpret the latest information

to help make recommendations. One interview participant shared that their watershed does not include any colleges or universities, so accessing academic resources has been a challenge.

“...access to research and scientific information that we can, when we do show up at these meetings, when we do show up at the table, that we’re not somehow apart from the experts. That we have as much information from sources that we trust as possible, so that we’re coming in really informed and we can make a strong case. In some cases that research just doesn’t exist right now... [A national nonprofit] has been instrumental in giving us access to that, because they have someone on staff who’s not a lawyer, he’s a researcher. And he’ll sit there and do the research. Yes, the technical information, the research that we need to be aware of, and then also knowing how things work.”

“And I think there’s not really a major university in our watershed, so there’s also not that option really. Now that I’m thinking about it, there really isn’t any, aside from local high schools, stuff like that. There isn’t any resource that way to tap.”

A focus group participant felt that having volunteers with some science background is helpful, especially in leadership roles.

“I think it would have been helpful if we’d had more people who had some basic science background, maybe local teachers, you know who teach science or people in the consulting world who were involved, who weren’t just strict you know, academics, but has had some kind of knowledge base, who could then provide some leadership for the group, because the folks who were involved, they were wonderful, they were very dedicated volunteers, but they don’t have the background to ask the questions... and the knowledge about how to you know move certain things forward.”

An interview participant shared a similar perspective, and the desire for people in leadership positions to gain additional technical skills.

“I think, as you know, I’ve been taking all the courses I could find and upping my game as much as I could. I wish more of the other people helping to lead would do that. I think the individual members, it’s not really on them to have those skills. The people I’m hoping will step up more to leadership stuff. I hope that they will also start doing all the amazing things around...”

Watershed group organizing skills

Several interview participants also spoke to the need for organizational skills, including leadership, running an organization, fundraising, and grant-writing. This was cited as a barrier to developing a more sustainable watershed group structure.

“Because we all have all the other things we need to do to – so internally, I think it’s that, it’s the technical support for how to build the group up in a way that’s more stable, more substantial, can bring more people in. To go from being kind of a guerilla, all right, action time.”

"I'm pretty good about finding the technical expertise that I need, at least in the science realm. In the business realm, less so... I just don't know where to go."

"We don't always have all the skills we need, at the time we need them. So right now, we're missing a couple of skills. We're missing a development director, someone who can concentrate on helping us get funds. Grants, fundraising, membership drives, whatever. ...Grant writing, we've done a bunch of it, lately more... And it is hell. Getting it together, getting the answers right, coaching the right people, making sure we – And then administering it is even worse, because most grants will reimburse you after you've spent the money, and if we didn't have money to spend in the first place, that's a real challenge. Funding is probably our biggest ongoing challenge."

"We don't have much expertise in grants, we don't have much in some of the town interactions that we would like to have."

A focus group participant noted that while there are trainings out there on effective meeting management and developing program objectives, they may not be accessible for watershed group volunteers.

"Not everybody can take two days off work, potentially for a long training. So that speaks to diversity and who's involved and who's represented, too."

Learning new technology can also be a barrier for watershed group members.

"Yeah. Certainly... even something as simple as how to use Google Drive. I think there are filing challenges. Technology."

"I mean, yeah, [the group is lacking technical skills,] to a degree. Some of it is just people being luddites. And that is very frustrating. People say stuff like, 'I don't really know how to do that!' And I'm like, 'Well, everybody else learned!' It is not impossible. But they just won't. They'll just decide, I am not going to learn that. So, sure, having some technical skills like some basic Microsoft Office skills. Or, knowing how to put together a website. But some of that stuff is so simple now. The platforms you can use, you can pretty much figure it out if you spend some time... it is really just more [about] motivation."

Outreach and communication

Watershed groups also need community-building, outreach, and communication skills. This can be a barrier to being inclusive and engaging more diverse communities. Watershed groups are interested in increasing communications through both traditional and web-based media.

"I think maybe community building skills, communication skills, all those other skills. Yeah, community building, communicating with non-technical audiences."

“Probably [lacking technical skills], in some sense. Our representatives and our leadership are pretty diverse in their backgrounds, but yeah there’s always -- public outreach strategies is a technical skill that I think we can improve on better.”

“Accessibility, like I think we... have a strong following for the people who are already engaged in what we're doing, but expanding upon that and like making it more inclusive and diverse is something we're really lacking, and also don't really have the skills well-established to move forward on, even though it is something I think we're really passionate about.”

“Right now we don't have a communications director either, so getting the word out press wise and doing warm press. We have a Facebook page, we have a website. The printed press is still important in this area, but it's hard to get it activated. And we don't have anyone doing the writing right now. So you get weaknesses, because you're lacking a key person in a key spot.”

“Just someone who is just good on, with, the internet. An internet person. We don't really have anyone that's stepped up. [One watershed group member] may be, but she was cyber bullied a few years ago by that disruptive person. So she had created a page but she got discouraged after being cyberbullied. She shut it down.”

Access to specific technical experts

While many watershed groups have access to technical skills, there may be specific expertise that they would benefit from. Several interview participants spoke to the need for access to specific technical experts to provide support beyond a volunteer role. Watershed groups may not have the resources or capacity to hire a consultant.

“No, I feel like we have, with [an academic institution] there, we have access to whatever we need, really. But not that we can pay for somebody to do a lot of that. But for answering questions, for some technical assistance with things, we know where to go, anyway.”

“I think it would be nice to have resources somewhere that people have access to for questions that they have. Scientists. Geologists. So instead of their volunteering, they actually have a role. Maybe they are consultants for HRWA... So [watershed groups] have the best knowledge to proceed.”

“Sometimes what we need is to hire an individual expert on a particular topic. And an example of that is disinfectant byproducts. How to have that resource at your disposal and know that you can cover the expense of doing it, as an example, would be valuable. So we can't go out and hire. We can't go out and get a consultant without getting a grant to get the consultant to do the work.”

Two focus group participants shared similar thoughts on the value of pooling resources and connecting watershed groups with specific experts to move key projects forward.

"I don't know if this would work, but I'm just thinking about, you know, pool expertise. You think about technical advice a lot and the type of technical expertise that you have to be able to give to watershed groups. But are there sort of clusters of experts that we can bring together and, again, have and deploy to different groups that need them? It's kind of like what THuRST is doing. ...[I]f you just use [nine element plans] as an example, all the different steps along the way are sort of different expertises that are needed. So if we could have regional people who develop that expertise, or cluster groups of people who can then serve as advisors, maybe that could help."

"...one of the things... that I learned is the importance of a hydrologist in looking at this. And the data that the hydrologist brought to the table in the community that we're working with was stunning. And we were able to look at all of the different sources such as groundwater, potential wells, and impacts... and having all of the data from a professional was very important, and there's a cost to that... [Communities] also should have a planner, because we're looking at land use planning and we're bringing in Pace, Dr. Nolan is going to be doing some modules and training for that, particularly bringing in land use to look at that. So tools are extraordinarily important, and if we can't provide them the proper tools then they won't be as productive as we hope for them to be...it was a level of expertise that we didn't have, as planning facilitators... to do that, and you needed to have someone who was either an engineer or someone with professional experience like that to be able to have a good source water protection plan."

In addition to scientific resources, interview participants also spoke to the need for legal advice and access to an attorney.

"[M]ost [agencies] are not going to build up their staff to the point where they're going to have their own special services, like accounting and legal and even an engineer. There's a few counties that have their own PEs on the staff, but most of them don't. I think if the forces at be would recognize that... Having an attorney that you could call in Albany that would actually give you practical advice, that's just one example. We've been getting some assistance from the county attorney's office. The first phase of [a restoration] project, or the first two phases, we used a private sector attorney. And it cost us some money, but I'll tell you, people don't realize, or some of them don't realize, that time is money. So I think we were doing better with a private attorney, because we were a paying client. When I called them and needed something, I got it. When I call the county attorney's office, it depends. We get bumped to the bottom of the pile very easily. So all the time I've tried to access the free assistance from the county's attorney's office, in a lot of cases I'd be better off just paying for it."

"Have a municipal lawyer on staff who can answer your questions without you having to hire a lawyer. Because once you do that, the municipality will no longer talk to you, if you're a citizen who has hired a lawyer. Now your lawyer has to speak to their lawyer. And you didn't know that. And you don't know to do and you need somebody to guide you... I would like a lawyer all the time! Municipal lawyer. Land use lawyer. This is the one skill I didn't get for myself and I regret it. I should have been a lawyer because I would be such a good advocate. A much better advocate. It takes me longer. I have to read the law... the time... and it's hard."

Legitimacy

Entities that have legitimacy are seen as having right and acceptable authority and influence. Watershed groups face many challenges around legitimacy, especially all-volunteer groups.

"It's been pointed out to us that if we had staff, that would be wonderful. Sometimes it's wonderful and sometimes it isn't, if you have to fire them every two years because your grant is over. And then you have inconsistency. It helps a little bit in fundraising to talk about all of our volunteers. Other groups are saying, 'You don't have staff? You can't be legitimate.'"

One watershed group felt they were perceived as more legitimate than they actually are. This assumption could be harmful.

"I think we're perceived very well. I think we have a very good reputation. I think, you know, maybe better than we deserve. We're not quite as organized and efficient as people think we are... I think it's real easy to look good as an environmental organization. Maybe not as easy to do good, but it's easy to look good, and get a good reputation, cause it's kind of - by definition, it's altruistic."

On the other hand, there is also the risk of being perceived as "too" legitimate, especially by community members.

"We had a real sense of needing to be very, very sensitive and delicate about the way that we work, operating in the community, to not come in with this attitude, with a savior attitude. To not come in and to be one more group that's kind of declaring itself more knowledgeable or more legitimate. There's a sense of poverty around legitimacy, and that's something that is really, you can sense it very strongly. Who gets to be considered legitimate? Whose concerns are legitimate? Whose actions are legitimate?"

Watershed groups being taken seriously

Watershed groups expressed a desire to be taken seriously by partners, including by regulatory agencies like NYS DEC, municipalities, and granting agencies. This requires knowing the right jargon, having data, and respect within their communities. There is a need for science literacy for communities to more actively participate in complex processes, so they are not discounted by officials.

"Then as a community, we only had a very specific amount of time where we could really get any information... Half an hour at the end, now, you've been talked at for an hour now, now it's Q&A. I felt after the first few meetings that I had gone to, that we were wasting that little chunk of time that we had. Because the questions, as far as I was hearing them, they kind of seemed to follow along two lines. Either people were getting up and their question was a way of expressing how incredibly upset they were, and how they had absolutely no trust in what anyone up there was saying. And often these types of questions were expressed with a lot of

anger, with a lot of emotion, and my perception was that these people were very quickly being written off by the people at the front of the room because, they just weren't listening to the science... And then the other line of question was, for the most part, kind of reaffirming the authority and the trust that people had. And not surprisingly, who was asking what kind of question was falling very much along racial and socio-economic lines."

A similar situation can play out with high-power developers, who deny problems and try to discredit community concerns.

"I would say the support is lacking from the large industrial firms that are coming in. As much as they've been alerted to problems, it's more denial and adversarial relationship than trying to work to mutually solve the problems. I see an effort to discount the things we bring up."

Watershed group members being taken seriously

Three interview participants expressed challenges with being taken seriously in their watershed work. This may be a result of communicating in a certain way, a lack of appreciation of technical experts for lived experience and a broader view of issues, and/or bias, such as sexism. Each of these quotations are from women.

"And a lot of people -- and I've been told this, too, that... people don't take me seriously. I feel like I know my stuff, but I know my stuff to a certain point, and I know my limits as far as the science of it all. And I may not just be able to convince others who might have a higher level of education, to be able to speak about these topics... I think a lot of it is a result of my teaching kids and explaining things to kids so that they can understand it. I probably tend to do that to adults. I'm talking to adults like they're fourth graders, maybe that's it. Because that's what I'm used to. But on the other hand, because of my marketing background, I understand that the general public is reading at a fourth grade level... With that said, they know about me, they know my name, they know something. But maybe not all are convinced that I know what I'm doing. And so that's the challenge, is to just help people understand that I think I have a pretty good handle on the science end of things, and I know when to raise a red flag and when not to. And not to be an alarmist about something people see in the streams, and help people realize how our sewer systems work, and that fundamental kind of stuff."

"And their meadow... is already getting flooded, so the [municipality] ... planning board... They're not believing that the additional water that's going to be discharged into the [stream] is going to be a problem. ...And the engineers that my [municipality] used don't seem to think that's going to be a problem... And I'm thinking -- I'm not a water expert, but I don't think I'm a stupid woman. So if we've had a lot of rain, and the [stream] is running high, and the pump stations are already struggling, and now you're going to add how many thousands of gallons of water a day from the [development] -- that's not going to impact the [stream]? That's not going to make the [stream] flood? I can't picture that. And I was told, but you know, you have to look at that through the whole [length], it's not gonna be all dumped in at once. I'm like okay, but if I have a glass of water and it's filled to the brim, and I try to put another tablespoon of water in, it's

gonna spill all over my kitchen counter. Isn't this the same? Like, am I really a simpleton? Like, do I not grasp the concept? They want me to believe that I don't grasp the concept... The [stream], I think, has the potential to be ruined forever, if we don't do something. Again, it's just been eye-opening to me. I knew nothing about water. Other than my limited stuff that I knew from the farm... I didn't know all about aquifers and storm water mitigation and wastewater management and pump stations and ground infiltration. I didn't know anything, I knew nothing about this stuff. Well, I know a lot now."

"Putting something about what it is to be a woman in an organizing or leadership role in these kinds of groups... I still think there are issues, obviously there's issues about who's going to be paid attention to. I usually don't mind [one male watershed group member] being the mouthpiece, because I think he's actually better at this material than I am, but not always. I don't use him as a front because I'm a woman, but at that point I was still really reeling from what had happened in [the municipality] where I managed the grant, wrote most of it, managed the other people who brought the whole thing home, was sort of the leader of the team until it became a life of its own, and the town supervisor acknowledged somebody else in front of 150 people. And then every single time he brought it up, he was acknowledging that person instead of me. Didn't end – you know. So that was enough to stop me in my tracks. So, I resigned, but I sent him a letter. And I said just so you have the fact, I don't care what you're going to do with it, but this is actually what happened... I don't need credit, but it's not alright with me for somebody to acknowledge somebody else who didn't do the work that I did. So that still stings... I haven't found that at all in the other watershed groups, it was just that particular thing. But how many other women does that happen to? I see that in the work that I do now. The people who get jobs on my roster is the women! Cause we have to work harder, to be heard, to be this, to be that. I have a reputation, apparently, in the [municipality], that I'm difficult. I'm not, I just say what I see. But that, for a woman, you're labeled as difficult. For a man, you're labeled as, 'Oh yeah, they really have good insight.' And I imagine I will run into that as we start really heading out into the municipalities again. 'Here's this difficult big mouth who just wants to get something done.' So, I think that makes things very difficult. Which is also partly why I like the notoriety of using the more established groups, because I on my own would not be able to really withstand that or stand for that. But if I've got [a regional nonprofit] in my back pocket and I've got the Hudson River Watershed Alliance and whoever else, then it gives you more credibility. But I think in this day and age still, as a woman, you don't have the credibility. I'm old enough that I'm tired of fighting. So, I think that's also part of what the barriers are. I don't want to go out and duke it out with people again... So that is a big barrier, I think that's why I haven't fully stepped in..."

Setting Priorities

Defining mission and role

Defining a specific mission, along with goals and objectives, is a challenge for many watershed groups. There are so many issues that it is difficult to prioritize and articulate a particular role.

While interview participants articulated this challenge, it was a central theme of focus group conversations and identified as a need. Focus group participants shared:

"I also think, or I'm speculating that, it would be helpful for watershed groups to have some sort of maybe training or some experience... like the stuff we did with NOAA, learning just even how to develop a mission and some program objectives, so that when they want to communicate who they are and get recruitment and figure out what their mandate is, they have some kind of structured thinking about it."

"...that idea of kind of presenting a structured mandate for those who are kind of reaching. ...[W]hen we decided we're going to focus on natural resource inventory and develop guidance and technical assistance and training, suddenly, these CACs, I felt like they were, I think they were reaching for mandate, knew exactly what they were going to plug into and that became a foundation. And I know DOS has a watershed planning guide, I know you know, you've just felt this great document that shares what watershed groups do, but I don't know if there was a group that felt like they were new or just kind of reinvigorating themselves, if it's clear to them like what are we really supposed to be working on. And anyway, so that I think that kind of ability to help them structure their thinking about what their goals are, what their mission is probably would be really invaluable."

Part of this challenge is identifying the right role for volunteer watershed groups, when the challenges and systems are so complex. They may need a legal framework, a structure for watershed planning, more formalized guidance, and overall a clearer path forward. A focus group participant expressed:

"There's so many examples of this that I run into all the time, where it just feels like the entire system is built in a way that makes it easy to mess things up. And the work that has to go into trying to restore something, even like a tiny little project, is absurdly difficult. The layers of science that are needed and the program, Clean Water Act or the state has, it's just really complicated. And you have to have a long-term commitment to try it and see something through. And yet, we expect volunteers to kind of do that. It's just, the whole system doesn't make any sense... I'd like to think we can aim higher ultimately, with trying to create a system that has enough support for watershed groups and the coordinator – paid coordinator seems like a key ingredient that's come up. And then I think another thing that's sort of been mentioned, but just makes a lot of sense to me is having a legal, like a framework in law for potentially like the CACs have... What is the version of that for a watershed plan or watershed group or an intermunicipal council? Can it be put into, you know, formalized in a way, so at least if you want to do the formal path there, it's defined?"

Decision-making and follow-through are also challenges, when watershed groups are trying to take on too much. Focus group participants:

"I think sometimes they need to be reminded of their focus. It's very – when they come together for this common cause, and then all of a sudden, we're going in fifteen different directions and then follow through – so just a little bit of guidance sometimes."

"I used to belong to a group and... I lasted about three years. Because everything you wanted to do is like, well, we've never done that before. And so, it was just this constant push back and I was like, you know what? I'm out. It's, you know, I'm here, we're coming with ideas and we're trying to do it, but you couldn't get past this mentality of, we don't want to, you know well, should we do that? Should we do it? We want to have this group and we want to make a difference, but it was like too hard to do the follow through."

"...[W]e have a lot of scattered large projects and following through on them is our other big challenge."

An additional challenge is the need to demonstrate success to keep watershed groups sustainable. This may become even harder with longer-term impacts of climate change. Focus group participant:

"I think one of the things that becomes really important is that people need, we need, successes, and we need to be able to demonstrate that all the monitoring and all the whatever is going on with the watershed groups are actually accomplishing something. And that's a tall order, but if you can if you can do that, then people will roll up their sleeves. I think people will roll up their sleeves because they realize that something is happening and change is occurring. And so I think we have some extraordinary challenges ahead of us, because I think we're all pretty much familiar with fecal indicator bacteria being used to sort of implement and monitor water quality and sewage up falls and leaky pipes etc., but where are we headed? ...without successes and without milestones with clear metrics, I think there's a certain amount of burnout that's going to be just inherent in the whole process... But having said that, I think that some of the really, really important issues ahead of us, which have to do with climate change, a warming water, warmer winters, more precipitation, are much more complicated to get engagement that's going to have immediate success."

Without a clearly defined mission, watershed groups run the risk of losing momentum and becoming inactive. This also relates to issues of leadership, and lacking a defined set of goals that the group is working towards collectively. Not having familiarity with the process of creating a mission statement can be a barrier.

"[W]e put together a mission statement. Which took us like four meetings to do, which is way too much! Ugh, it was the worst! You know, I just got all these like resources that I have for stuff like that, and I would explain to people that it needs to be short and very clear. But just the directions it went off in – because people aren't familiar with this stuff... I think it just has to do with, if you don't put in the front-end work of understanding what you are supposed to be doing, what your mission is, I think it's easy for people to get pulled apart. And when you have well-meaning individuals, all working in different directions, you are not going to achieve"

anything. I mean, I don't think the group has been killed, but it is in a lull. And I think that's a big part of it."

There is a need for structure and goals that match the group's capacity, or build capacity to achieve goals. Some groups may take on too many roles at once, in an attempt to secure funding. This can make regional cooperation more challenging, as entities stake a claim for specific roles and subject areas.

"And then, to be frank, you know, as more people started coming on, more people started saying, 'Oh let's do this, this, and this.' Things that fully staffed, paid staff-type, organizations - 'Let's do a festival!' And I'm like, what?! We cannot do a festival. We don't even have nonprofit status. We're just a group that gets together. And then we spent a whole meeting talking about a festival. So, I thought, okay, there's ideas here but it really needs some infrastructure... I just mean, the conversations we would have in our meetings were so fruitless, because it would almost inevitably be, someone brings up an idea. We would discuss the idea, even though it is way beyond the purview of what we can do... So, it is just not strategic."

"There's this competition. And I guess that's the nature of things, and there's something to be said about carving out in your area and going after the funding of, when we all know this is what you do, so that everybody can continue to do their work. It's when you start lobbying on and thinking that you can do things that you can't do even. It's all about sort of a distancing from the situation and trying to hoard resources. I don't know why you would do that, there's a lot of reasons why. You know, we really need to make sure that the health of the organizations are on there, too. Because we all are doing different things and it's not a competition."

In addition to articulating watershed groups' priorities, there is a need to clearly articulate watershed priorities. This is especially valuable in connecting the groups' work to local issues of concern. An interview participant that provides staff support to a watershed group:

"I will tell you, I haven't been on throughout the entire watershed, so I couldn't say overall what are the three things of the whole watershed. But I think pollution is one."

Over time, watershed groups may also need to reconsider and re-prioritize their work. Changing directions or setting new priorities can also be a challenge.

"Maybe they're still thinking of us as this little cheerful 501(c)(3) who's going to take care of the [stream]. But I see us moving in a different direction, I see us moving in that affiliation with government, I mean we have to. You can't stand still doing the same thing and expect it to change, you have to try something else."

Watershed group planning

Watershed group planning needs include internal plans to grow capacity, set priorities, establish work plans, and work toward their goals.

“The thing for our group in particular, it's just a matter of prioritization. Realistic prioritization... it is just hard to get this group to focus.”

A focus group participant shared that it is a challenge for watershed groups to develop plans of their own, outside of existing opportunities.

“...they're not necessarily good at coming up with those plans... When they're presented with like a role or a plan on what they can do and how they can move forward and, you know, actions and things like that, many of them excel, but... they struggle with coming up with those ideas or that plan or those actions without input or assistance.”

Watershed groups are interested in growing their capacity, roles, and activities, but they need more information on how best to do this. They are looking to Hudson River Watershed Alliance to provide this support.

“I guess the big thing that's difficult right now is that we're at a time where we should be going beyond what we started doing, and I'm finding that hard to do. Like growing in terms of our role and activities. When started we just... did citizen science. And we've been doing that for four years. It's time to have a bigger story, and I'm not sure how to do that. We did the same thing last year and made progress. I think that there's a bit of complacency having done the same thing for three or four years. We should be evolving more than we have been.”

“And from you, how have other watersheds gotten from this place to the next place? Because really it's been, this is like the third rendition. I started once and it got kicked out of the water by somebody, and then it's not going to happen again this time. And then before that it's like, as soon as the... watershed plan was done, it was over. And then there's some personalities involved in things that, you know, issues from time to time. But what are you going to do about that?”

Watershed groups need a plan to help guide their work and identify key actions. While there are many passionate people willing to work hard, and some overall ways they get community feedback, many groups lack direction. This requires both funding and expertise.

“I'm a novice in all this so, I'm just not quite sure where the heck to go... I know there's a lot of hard work to be done. But there are some really awesome people in our community willing to work hard. I am one of them and I take direction quite well, so if... they tell me, you need to do this. I'm good to go. But I just don't have any direction.”

“Not so much, [having a plan to guide work is] definitely an area we can improve upon. The group does have a mission and goals, don't quote me on that right now [laughter], but we do. So that does guide us and our mission in that sense, but again also the fact that it is an intermunicipal council, we always welcome the feedback of the representatives from the council and are always striving to bring to the meetings other projects that we're working on, we try to

bring ideas that they have, desires they have, whether it be for speakers for the meetings or projects that they want to work on.”

“I don’t know if the strategic plan is separate from the watershed management plan or if they’re the same thing. But yeah, that is where we want to go, and I think we need to determine if that’s something we can do ourselves or if we need additional resources to do that.”

“So that’s a challenge that I’m now dealing with, as I am working on developing a five-year action plan. I think that that has to do with – also with the different grant proposals that we are putting in- so my background, I have a very strong background in community engagement stuff, and the management and organizing people and managing this whole operation, but less professional experience in watershed restoration and river restoration. Basic stuff, right? When I am organizing stewardship groups or community engagement events, I am like a fish in water. But then when I have to write a five-year action plan – so I take in all the different ideas that I hear from our partners, from the municipal partners, all those ideas that we have, and I research and read other five-year action plans. But it is definitely a challenge to write a professional document that has to be reviewed by the [government funders] and is going to be our strategy for the next five years, and yeah and that’s definitely a challenge. So I have support... but yeah, I’d say that professional knowledge in developing strategy is something that I could use the help of.”

Several watershed groups specifically articulated the need for a strategic plan to provide structure and clear steps for action. There is a need to be proactive, while also being able to respond to crises as they arise. An overall strategy may also need to include a shorter-term work plan to take actions in steps.

“And I think organizational and strategic planning, because what we’re taking on is so big, really... And so also knowing how to articulate. In a way, the grant last year really helped us do that, because it really helped us have, well, this what we promised, so this is what we have to do. But now that we’re not, we don’t have a grant at all, and we don’t have that kind of, that structure isn’t being imposed on us, then how do we get both smart and practical, with enough space for creativity and variation, to say that these are reasonable goals for this year... But what do we choose and how do we kind of make it fit into a strategic plan that’s specific to the year? ...Otherwise, what we see is easiest, the kind of status quo, is that we keep operating from a crisis response place... How do we shift from – and we did, I feel like, over the course of 2019, we did really start to shift that balance. But then we need to go in that direction much more clearly. That we’re responding to the crisis, but not in crisis mode.”

“I mean, we actually need to come up with a strategic plan. We had things we wanted to do, so last year was really about getting us on the map and getting us more known... I think we’re in a spot that we need to get to the other side of... And then I think that just not having a really clear-cut strategy, you know, ‘What are we going to do this month? Where are we going to be this quarter?’ But, I mean we – It’s the first of the year so we probably should’ve had that meeting be a strategy meeting. So that we’re really focused on, ‘Okay we’re doing this then’ and

doing a calendar for the year... not enough planning... We're at the next stage of organization, so figuring out how we're going to organize so that we can have some funds to do the little things that we want to do for this year."

An interview participant who provides staff support to a watershed group discussed that their long-term plans are uncertain, but that their strategic planning effort may help inform the watershed work.

"I mean, I'll be perfectly honest. We don't have intentions for another project or really any long-term plans beyond this... We'll have the plan on our website and certainly we'll be referencing it where applicable in our interactions with municipalities and some of our other work. But I think without a doubt, I do see us being involved in the future again in some way. Like right now, capacity-wise, we're also working on trying to build our structure internally... So [the staff support person's organization is] going through a strategic planning process. So I think some of that has got to occur for us to then be able to come back down from the organizational level to the program and project level and where those things are going to be headed."

More specifically, watershed groups may need to think strategically about certain projects or programs. For example, there is a need for strategic thinking around next steps for water quality monitoring and community engagement to set priorities for watershed-related research.

"I think the ELAP certified requirement is certainly a big barrier. That's a big one. But it's not necessarily a barrier, it's just going to take some strategic thinking about what next steps are going to be and alternative sources of funding... [P]erhaps the next step is how to do a better job of involving the community at all stages of the research process. And the kinds of things that we don't need funding for, I have a student doing the literature review right now about citizen science water quality projects and what they look like and where they're happening and outcomes and that kind of thing. That's the first step."

Watershed management planning

In addition to internal planning, watershed groups articulated the need for watershed management plans. Funding for planning is needed, along with plans that clearly identify priority projects and prioritize next steps for implementation.

"If I had funding, the first thing I would do is develop a watershed management plan, because we have to analyze and map out the potential restoration sites. We want to map out hotspots for pollution. Have professional firms analyze the situation of the river. In the proposal that we put in, and that's going to be part of the RFQ that we will submit if we are granted this grant, we are requesting a list of potential floodplain restoration sites and a community engagement process that at the end of it, five sites would be selected for either floodplain restoration or ecosystem recreation, or both of them together. So five projects would be selected and those projects would get 25% to design documents. The idea is that for those few locations, we will

already be in a place where we can more easily raise money for implementation. So that's the first step that I would do, is develop a watershed management program."

"I think that [a plan or program to help strategize] is something we're working towards because we have these two documents, and actually even more documents, that talk about the current status of the creek, but they don't prioritize implementation steps."

"The advanced modeling that exists for nine element plans to me could be a really useful tool for prioritizing areas in the watershed to focus on. And without that modeling and without that prioritizing, we sound like remote moaning and groaning and it's too large to deal with. So I would love to prioritize... If we could prioritize chronic stormwater, nutrient loading, septic failure in different reaches and address them for success, even if that success is a 5%, 10% reduction. It's to cumulatively start turning things around."

Municipalities that do not appreciate the value of planning for water can act as a barrier for watershed planning.

"But the importance of planning when it comes to water is maybe something that's underutilized and not well understood. And so when, in my town we have a leader who understands the value of planning for water. It's so fantastic."

In some cases, watershed groups are interested in more specific planning projects that focus on septic systems, road-stream crossings, and stream buffers.

"[S]ome sort of septic mapping... I think an assessment of, like landscape-level assessments that look at – I guess maybe damage assessments? And a buffer assessment would probably be useful. ...I think there's an opportunity and there's money right now, too, road stream crossing assessments."

Watershed groups may also need a better understanding of planning approaches.

"I looked over – you uploaded the Wallkill and Quassaick plans and one of them, it looked like, was prepared with the Department of State and one of them wasn't. But would they both be recognized by the state as official plans? I guess I have questions still towards what the best way to go about preparing a plan like that is. And I think the group would be interested, too."

Watershed groups can create plans, but often need help taking the next steps. Having a collaborative planning process with various partners can help set up plans for implementation. Focus group participant:

"I think there could be more of those meetings [that bring people from different backgrounds together] and if they could get us more focused more often, it could be very exciting... I think the opportunity would be to get people who would say, 'Hey, I saw you have an interest for it and doing all these things, let's try to get the people who talk about these ideas together and say

what would it take to get there? What would we have to do to get there?’ Creating a shopping list and buying some of the stuff and put together the plan that gets us over the finish line... But I think if we could get people together to say, ‘Okay we did this, how do we get over the finish line?’ I think that’s the opportunity because we’ve got lots of good planning thanks to watershed groups, but there’s this obstacle of actually doing those things.”

While funding is often cited as a barrier, a lack of planning to identify projects can also be a significant barrier. Communities may not be ready to spend funds that become available if they don’t have a list of priority projects ready.

“People always talk about funding as being the issue, but we found that a lot of communities aren’t ready to spend a lot of funding because there’s so much work and planning and finding the issues and finding the conceptual designs. So, if the groups could kind of help fill that project pipeline, then that’s one thing we’re looking for.”

Responding to crises

While watershed groups would benefit from planning, they also need the flexibility and capacity to respond to crises as they arise. Several interview participants spoke to the challenge of devoting their limited resources to focus on new issues, including new development, harmful algal blooms, extreme weather, and other less predictable problems. It can be challenging to sustain momentum, focus on just one topic, and manage challenging power dynamics.

“...[W]hatever fires need putting out, that come up... a lot of energy got devoted... that we hadn’t anticipated. So, leaving that breathing room, almost, you need to leave enough breathing room to deal with fires to put out – or just opportunities that come up, that you don’t plan for... So we do [a list of regular programming], and in between we just put out fires. So if there’s a [crisis], everyone gets diverted to doing that.”

“But it’s hard. This year we got pulled out by one project that’s proposed in our area that we feel will have not a good impact... That’s taken a tremendous amount of time for me. First understanding what the project is proposing, and now worrying and fighting about it because we think that the environmental impacts are not good... and so we have a fight on our hands. And the people are out over it. And then also there was... a construction and debris dumping ongoing, even though there’s been laws that have been trampled and court decisions that have been made, the guy still keeps going. And so it’s troubling, but the public has been galvanized... But people have come together to try to deal with that, which has been hard.... And it’s been a tremendous amount of my time. Unplanned.”

“So I mean we had fun, so then things shifted.... It was a crisis. And you had... federal, state, county, regional, city, it was political science’s dream. Eventually... all the different volunteers... said, ‘Have to pick, I can’t go to so many.’ So we had a crisis, so we picked that. So it weakened the regularity of our meetings, but it didn’t weaken the passion of our advocacy... It was extremely political, and ...so [the watershed group] provided that neutral willingness to stick our

necks out. And where you have... municipal leaders signing every single letter... It was impressive... There's a huge anger... The residential anger, the political response from the residents, that's going to be even harder to navigate in some ways. And that will push political leaders to be more polarizing then maybe they would choose to be."

Keeping momentum over the long-term

Watershed work is slow and hard. It requires real patience and a long-term perspective to commit to this work. The work is never-ending, so it requires people to set their own measures of success.

"And patience. I mean, you have to have the long-term goal, vision. You have to... You know, people change. You have to have patience."

"I think there's always a frustration that it doesn't move quite as fast as you might like. If you've worked in the business world or the engineering field, you tend to get used to doing things on a more aggressive schedule at time. But you have to balance that with the fact that a number of these people are volunteers and fitting it in with their lives. I would say the speed of doing things is not quite the same that you would want."

"So you have to [see] the yin and the yang. Otherwise... if you don't do that in watershed work, you will truly put your head in the oven. [laughter] You have to look at it that way, because it's a lonely kind of work to do, sometimes you just feel like there's no tomorrow, you're just beating your head against that wall, you ask yourself, 'Why am I doing this?' and 'Oh no, it's another election year, now I'm going to have a new mayor to convince.' I had to learn that if you get involved as a watershed coordinator person, your job is never done. There's no end. If and when I retire from this kind of work, I can look back and see the things that have been done, but it's not done. Sometimes if you're a project manager, you're going to build a trail and the trail gets built and the signs are up and the parking lot is done and you drive away. But for this kind of thing there's no end... And maybe some of those kids that I taught something to are going to be the next watershed coordinator. Let's hope. Knowing that there's never an end to this project is something that you have to be aware of and adjust yourself to. If you're the type of person where you're very linear and you do all your tasks in a row, that's not this job. It ain't linear, just like that creek is not. It's meandering and it's dry and then it's flooded, that's the job, it's just like the creek. It just twists and turns and there's rocks."

Focus group participants shared this perspective. Despite the need, the work is so hard that it is easy to give up. Watershed groups can plan an important role in highlighting obstacles, though, and helping overcome local barriers. Systems are in place that make it much easier to have impacts than it is to clean things up. Processes like Total Maximum Daily Loads (TMDLs) or 9 element watershed plans are extremely complex and long-term, and challenging for volunteer watershed groups to manage.

"In some respects, I always look at the water situation in New York and we have such a rich water resource and how much better we can take care of it. And I think it's really a situation where it is an emergency situation. There are so many places where they just let things go, because it is easier at the end of the day for the community to not have to deal with how hard it is to get things done. And so, I think really looking at those, if watershed groups can look at those obstacles to actually getting across the finish line and figure out ways of removing those obstacles, that would be very helpful."

"I would love to see thought go into how do we get these watershed groups to affect actual real change in the communities... So, something needs to change, and there are places where real change can and should happen and that's where more thought needs to go, and I don't have the answer because after 14 years I wasn't able to completely get there. But I think we made some good changes and I know lots of people are making good changes, but still."

"There's so many examples of this that I run into all the time, where it just feels like the entire system is built in a way that makes it easy to mess things up. And the work that has to go into trying to restore something, even like a tiny little project, is absurdly difficult. You know, the layers of science that are needed, and the program, you know, Clean Water Act or the state has. It's just really complicated and you have to have a long-term commitment to try it and see something through."

"...[T]he process playing out for the [watershed] to actually lead to a project that might improve water quality is going to be another 5 to 10 years, so the longevity needed to see any of that through is extraordinary."

It is challenging to keep momentum up after achieving an initial goal that brought people together, or after a significant event like Hurricane Irene. The length of the planning process can also be a challenge, causing watershed groups to lose momentum. A focus group participant noted that with the timing of grants, it can also be difficult to move into actions and get started with projects.

"...[W]e were able to make again some strides off of the early... work after Irene and Lee, so that has kind of, it's fading in people's memories a little bit. And so the challenge is the impetus, or having those driving forces or driving organizations, or capacity to keep moving this along."

"I was a little frustrated with the time it took to do the plan because, I don't know if you've seen this before, but if you take too long you start to lose people's attention. And I think that happened a little bit, because you can only get people coming back to meetings so many times. And then if there's a really long time between the meetings, you kind of lose some of that momentum."

"...this stuff takes time and everybody wants it done yesterday and it just doesn't happen. And a classic example is funding, grants take time. ...[I]t would be great if you had them planned and ready to go and everything, and that doesn't always happen because you don't always have the

time or the prioritization tools to put it together that way, right. And by the time funding comes available, it's all awry."

"I think the main concern would be just the group losing momentum. Not to say we're in our heyday, but we're kind of moving along with some good progress right now, and I'd be heartbroken if the group lost that momentum and the work that we've put in so far didn't progress and didn't continue on."

People that were involved in watershed groups, even in leadership roles, may move onto other projects over time. For watershed groups that are less active, it would be challenging to bring the same people back together.

"The people are still around, but the people have new assignments now, new jobs, or people get older. Things happen and who knows, I might be able to pull together some of those folks again. But maybe not."

"So we had like a leadership team, with five to eight people, who would get on a call as soon as possible [if there was an urgent need to meet]. Whether anything would happen after that is another question. Getting people to follow up and do simple tasks was very challenging. And so, the bigger group, the 300 people on the email list, they might come to a meeting. I don't have any expectation that your random Joe or Jane off the street is going to come in and take on a big task. But I do think that the energy is there. It is just dispersed."

Communication

Lack of awareness of watershed/need for outreach

Many watershed groups focus on rivers and streams that may not be well-known in their communities. Municipalities may know certain segments but lack an awareness of the watershed context. There may be a lack of name recognition, or even awareness that the river or stream exists.

"It is probably less well-known and, you know, I'm beginning to wonder if in part it's because people don't even really know how to pronounce it. It's just sort of peculiar. You know it's oddly fit... And we've got some neighbor watersheds that maybe better known."

"Maybe some people have a sense of that, but I don't ever see it promoted... You know, if there's an issue or a problem, then they are dealing with it wherever that spot is. But they're not saying, 'Oh look at this wonderful creek and the history of it.' You know, there are local things that happen. A little history show... and maybe the creek is mentioned. But there's no real overall picture of the [creek] as an entity in and of itself."

"I think the fact that the [stream] is a somewhat hidden stream is a big challenge."

“But there is definitely a lack of knowledge, the vast majority of people in the watershed don’t even know about the river. They only know about it as something that floods... every once in a while, and creates traffic. But when you are riding your bikes or hiking..., which is something a lot of people do, you can barely even see the river... A lot of people are not aware of it, and I think it has to do again with the jurisdiction issue, where it kind of falls in between the chairs, right? No one, except for the [watershed group], no one is responsible for this river. No one is [advocating for it]... Except for what we are doing now, but we are like a grassroots initiative, a grassroots group.”

“So often times I had been asked about, should I switch my gears instead of looking at that entire watershed, and think more about specific tributaries... and there was this whole thing about name recognition because the [larger watershed] – people would kind of squiggle up their face and go, ‘Where? Isn’t that in Massachusetts?’ ...There was this whole name recognition thing when I had my advisory committee together. We went round and round about what we were going to call our group and there were some strong opinions about it being known as the [name of a tributary] watershed, and then there were people who said hydrologically speaking, this is technically the [larger] watershed, and that’s what the DEC refers to it as. So our thought was let’s call it what the DEC is calling it... [T]here’s much more recognition about [the smaller tributary] than there ever was to [the larger watershed]. That brought me to start that marketing campaign with signage and a logo, and we had little lawn signs that we were putting all over the place. I tried to get billboards set up, anything we can to just help people understand that this is the [larger] watershed. I even approached the DOT to try to put up signs like the DEC had done with the sturgeon sign... But it became complicated, because of which roads we wanted to put these signs on, is it a state road, is it a county road, they go through all that stuff. So we never did get those signs, but we had those lawn signs around and we did our best to get that name out from the bottom of the horizon to a little higher in people’s eyesight to know where are we, what is this watershed.”

Balancing the message is important, as too much attention to a waterbody can also be a challenge.

“I think the towns that always tried to hide the river are focusing on trying to bring it to the forefront... You have to be careful what you wish for, if you bring too much attention to the river you could love it to death... We don’t have the corporations or the big businesses, but you have a lot of housing development on it, and that poses a burden on the [stream], as well.”

Another communication barrier is that people may not know what a watershed is.

“Well first of all, what is a watershed. A lot of people don’t understand that they live in a watershed, of course everyone does, but... And how does the [specific watershed’s] health affect them?”

“I think maybe just an understanding of what watersheds are can sometimes be a barrier. Like people sometimes don’t really get it.”

A focus group participant observed that the watershed concept may be limiting participation by focusing on too narrow an area. People are interested in getting involved and doing something positive for their communities and may be less interested in the specific watershed where it's happening.

"...people will participate in that volunteer event, regardless of where it is. There's a whole audience of folks who want to do something positive for water, they think water is interesting, and they'll come out and do WAVE monitoring. I was kind of groomed on the idea of watershed groups and watershed planning, but I'm also thinking that people may not be as needy of that.... They want to know generally, in our area, goes to the Hudson. I get more concerned with the delineations of which watershed it is than they are. They're kind of mildly curious... But they'll just carry on and do the monitoring... [M]aybe the watershed concept group is slowing things down, and in fact it's a more generalized interest in protecting water quality and informing others that this is where you are, but the work that you're doing has value in a lot of different ways and you can connect them up in different ways as to where that value is."

In some areas, a lack of recognition results in a lack of funding and programmatic resources available. This is especially the case for the watersheds that are outside of the Hudson River Estuary Program's focus area.

"We're kind of, and I think it's because we haven't been around for so long, it's just there's a lot of focus put on Lower Hudson. Very little focus put on Upper Hudson. I think that that's probably our biggest challenge... Recognition and maybe even just some of the available programming that is afforded to Lower Hudson could be opened up to Upper Hudson."

Watershed groups need public awareness to build local support for projects.

"Well, I think public awareness about the parts of the... watershed that impacts them, so that they can be useful in their, you know, they can apply their ability. Like if there is an issue in [a municipality] and there is a small group of citizens in [that municipality] who you can contact, and they can go straight to their elected officials, in ways that I can't. When we did [an advocacy project] in [a different municipality], I put together a citizens group. Because I can't go into [that municipality] and say, Hey what you are doing is bad for us over in [my municipality]. You have to have citizens who are in the community that is impacted speak to their elected officials. You can't march into someone's community and do that. You aren't voting, and you're not living there. And so having a more diverse base of citizens allows you to really make changes with the local government."

Watershed groups may need support with creating specific messages about the watershed and their work to better reach the community. They may also need to work with partners to share this outreach work.

"We have somebody who's monitoring our web page, and we get contributions every once in a while, but we're not getting much feedback on that. So, we also, if we hear of something like [an

event], I was there tabling. I think one person came by and picked up one little card. That never works, and I've done that probably more times than anybody else over the nine years. I've been at various events, farmers markets..., at the high school, it just doesn't seem to work. I don't know how to communicate about the [watershed], I think that needs to come from a more official source, like [the municipality]. I see that they need to send out something to all the people who live within that watershed, if we could get them to do that, to say, look this is what's going on. Maybe a little newsletter. There is a newsletter but I don't know how often they talk about the [watershed]."

"I guess for me, it would be like where someone else could step up. I don't see... us taking on a major role with public education and outreach. But that being said, I mean, any time we can help someone implement anything like that, we certainly would. To like get a space or find places someone could go to... like the farmer's markets or things like that."

An additional communication challenge is balancing complex messages that may seem to be in conflict. Watershed groups want communities to appreciate their rivers and streams, while also pointing out their issues. This can be complicated when specific group members have a vested interest in how the waterbodies are portrayed.

"And that's one of the problems of the group, should we – this was an early on consideration – should we tell people about the [stream] and what a great place it could be to appreciate, or should we warn them about the dangers of the [stream]? And that's a balancing act. I'd like to get to the middle there, should our group as a volunteer group be alerting the public, or is that the administration's job? Which I believe it is the administration's job. We're not the health department, we're not the supervisor's office, they need to do that. They need to step up... It was after that article came out... and it was concerning the [stream]... [One watershed group member] didn't like the way the creek was presented. But a lot of our group see that it's somewhat accurate, and it's not all that bad, and maybe it's good that it got some notoriety. Maybe not in the best way, but I'm foreseeing that somehow, we nudge the town into starting to take more of an active role in doing something about the [stream]. I think if the DEC sends out an alert that there's been a sewage spill, that's about the only time there's a reaction. It's not like the town or the health department at the county is even alerting people, 'Well watch out after rain or heavy rain...' Something that [a regional nonprofit] has gotten done for the river, but it maybe should be notified for the public who live around the [stream], not that many people are going to go jumping into the [stream] after a rain event but, there's no notification for health on the [stream]... I see [one watershed group member] as the educator, she is out there with the kids... So naturally, she did not want to diss the condition of the [stream], because that makes it difficult to wear the hat of, 'Let's go down to the creek and learn about it and interact with it.' If you're saying something to a newspaper reporter about how the creek is terrible and you don't want to go near it, that does not go with the other hat you wear about being an educator. It was telling in the fact that [two educators] were the ones that were the most adamant about that article. The rest of us say, 'Well, it does tell the picture. It does say the condition of the creek. There is nothing that we have not heard or seen.'"

Lack of awareness of watershed group/need to articulate work

In addition to the watersheds themselves, watershed groups also need to communicate about their existence and work. Many watershed groups are not well known in their communities, and need to increase public awareness, interest, and engagement. In response to the interview question, 'how is your watershed group perceived in the community':

"It's not well-known, but I think it's positive where it is known."

"I don't think it's perceived very much yet."

"You know, I don't think we've really gauged that. I would dare say it's mostly unknown."

"Positively. I've never gotten any kind of bad press or anything. I think it's not known - like it's not something everyone in the community is talking about."

"What would be a real challenge is that, people know about it better, that its presence is not a second guess, it's like, 'Who are these guys?' That seems to be one of those things, just getting yourself known somehow. But there are people who hear about it and know about it, but it's not conversation enough. I had no idea until I got involved... that a group like this existed."

"We've been perceived as a small group doing citizen science type work, basically... We're small, and that's, you know, I don't think we have a very high profile in the community, but those that know us, I think, we feel very comfortable with the working relationship."

"I think for the most part it's pretty hidden. I would say from my impression is from being involved in it for the past eight years, I don't think most people even know what it is. So we probably have not done a very effective job throughout the years, of trying to be out there. Except for municipal leaders. Municipal and county leaders know what we are about and what we can do. We have been effective in terms of coordinating things at the county level and then beyond that. And even at the state level, we to try and achieve some goals and projects that we feel are important. In terms of the general project, I don't think the general public is aware that we exist, for the most part."

"I don't think we're perceived much, cause I don't think many people know we exist. ...[W]e're more well known in [one municipality] than anywhere else, because we have more of a membership from [that municipality] than anywhere else. You know in [a different municipality], where we have one member, as active as [that member] is, not a lot of people in [that municipality] know, cause we're not visible presence in the community."

"I don't think they even know we exist. And, well, like I was saying, that, to me, is one of the big hurdles. Is public awareness, public outreach, public participation. It's really hard to get people to understand what's going on. They get all up in arms, but then they don't come out to try and, you know, get engaged... I think letting the public see what the needs are and what work is

already being done [would make the group more successful in the short-term]. And advertising the group.”

In communicating about watershed groups, it can be a challenge to articulate specific accomplishments or goals. A focus group participant highlighted the need for storytelling, which is slightly different from communication and important for grant-writing. An interview participant in response to a question asking about the group’s accomplishments:

“It is frustrating because people ask questions, you know, when you’re at a dinner party like, ‘Oh, so what is that?’ It’s like, okay, ‘We write letters, we’re building kiosks, we have stream gauges, we have a plan that we’ve written.’ But I don’t know, what’d you say, a major accomplishment?”

Traditional media

A lack of media coverage, including local newspapers, makes it hard to know who is doing what, hard to keep up with new projects, and if/where groups are active. A lack of communication makes it harder to develop partnerships. Watershed groups are limited in their ability to influence messaging in local media. Even where local newspapers are reporting on watershed group activity, they may not convey the messages accurately. Two focus group participants:

“I keep getting the Poughkeepsie Journal because I want to know what’s going on in my local community, and it’s possible that there’s stuff going on, but honestly the loss of Dan Shapley from the Poughkeepsie Journal was an enormous loss, because he reported about all of these activities all the time. And he’s no longer there. So just – I don’t even know whether these entities exist any longer if they do, what kind of work, they’re doing, so I just feel like the loss of the local media has been a huge problem as well.”

“...we were able to do more stream monitoring, more dense and more locations and repeat some of them over several years, than any other part of the state had at the time. But the data didn’t, you know, when it finally got reported in the paper, the reporter sort of picked the best data and said, ‘it looks pretty good,’ meaning overall in the county, which was not the story that they really told. And that’s very frustrating, it is as a group, even groups that are much more out there and advocacy-based than ours. It’s very hard to change what’s going on, and that’s a big frustration.”

Online communication – website and social media

Interview participants spoke to the need to maintain a web presence through websites and social media. They need additional people to have these specific communications roles.

“With media, we’ve been very poor in getting the media involved in what we are doing. And that’s how much of the public gets to know about what we are. So those are some of the challenges or weaknesses. We need a good media person, we need people to, maybe even like

to go out and talk to different organizations, alliances clubs, you know, whatever organization. That type of outreach has been a weakness for us. Or lack of... We do have a Facebook page, we have a site online..., which I think is very, maybe obscure. It is very small. I don't even know whether they count the hits on it or not... In fact, I have to go down there and get it updated, because some reports that were left out and some of the information is obsolete now."

"I think one weaker area of ours is, we're not real skilled in the social media... I don't know what to do with it. There's things about that that I just have an issue with. And that probably goes more for me personally. The concept of Facebook bothers me because everyone sees all kinds of things, and people put all kinds of things on it... But for an organization, and the way people now, younger people, look at it. It would be nice to have it handled well enough to really help us move into the community with information, with requests. With the ability for them to ask questions and we can feed responses back to them somehow. It's an interesting dynamic, it's not just one way, it can be two way. And we're not doing it that well."

Technology is important for communicating, especially for municipal officials. An interview participant noted that they can get more done if people understand what's going on.

"And from a technical standpoint, I think most communities are with their local officials, have no choice but to get technologically advanced, because that's how everybody communicates. But again, it's not always easy. It's something comes with time and usually a lot of focus and effort... And that's great because any time we get them to understand what's going on, it's a bonus for getting things done properly and getting more things accomplished. So I think the [watershed group] is in the same situation, where communication is key, and being technologically advanced, if you can make it happen, is key. Not that I see us being able to televise our quarterly meetings, but I think anything we can do to get the word out, that not only do we exist, but why we exist, is helpful."

Focus group participants discussed the need for better communication and public-facing materials. These can include websites, social media, and brochures. Watershed groups may lack capacity, skills, or both.

"I don't actually know if this is a need, but it would occur to me that having good supporting communication skills like how to use social media or how to do a basic website or how to create a presence for yourself... If they want to be able to have a public facing presence, what are the building blocks for enabling them to share their story?"

"...thinking about like that public presence and that I don't know if it's necessarily a skill, I mean, I think it comes back to capacity, but you know again, it's a barrier I would say is that, having the ability to have some sort of online presence is just the amount of time that it takes to kind of put into that, to maintain that sort of thing. I think is another barrier, because that is a great way to get information out there and to connect with people but it takes a lot of time, so. I'm skilled."

"I was just going to say this reminds me, Emily, when Emily taught me how to use Instagram because I wanted to create a hashtag... and that's something I wouldn't have known to do. And I'm guessing a lot of our retired partners don't, you know, that's like a simple thing to do that suddenly creates a connection with all these people so that's again, getting that idea of how to communicate even – it could be like simple tricks. You know, nothing super substantial, even, would probably get them a long way."

"...having like some kind of web presence, that we just don't have or have the capacity to do. I mean, we do have some representatives from Cornell Cooperative Extension that might potentially serve that role, but I mean, even things like social media and a website is something that we just don't have the capacity to keep up with our group. So figuring out a way to do that seems like something that we've talked about a lot, or like places where things can live like you know, a management plan. We can put that on a website somewhere that everyone can find easily if they want to look at."

Having an effective website is also important to developing partnerships with new audiences. A focus group participant from an academic institution described the challenge of trying to work with watershed groups as an outsider.

"... being able to manage a website... I'm always looking in from outside, usually, in my work. And to do something online is usually my first stop to trying to understand something. And if they've got it mapped out well and it's there, with maybe a little bit of a narrative or a story map or something, that really helps me understand, like, here's what this group does. I think, everybody's - I struggle with those skills, to keep my own website up-to-date, right? I wish [my academic institution] helped me more, but they don't. They usually just tell me what it has to be like and then I have to go do it. I think we all struggle with that, but I think that it's an important skill to have if you're trying to pull in that external audience. I think watershed groups, they have to pull in people from their own watershed, where that may or may not be important, because, again, maybe you can just go out and talk to people or go to community events and things like that. But if you're trying to pull in other stakeholders, agencies, Trout Unlimited, academics, etc., then I think having a good enough presence and technical ability is important."

Community engagement and communication

Many watershed groups expressed an interest in communication skills that can help with community engagement. This includes building relationships with new partners, including sporting groups or organizations that are not focused on the environment. Language barriers may also contribute to this challenge.

"I think maybe community-building skills, communication skills, all those other skills. Yeah, community building, communicating with non-technical audiences... I don't know enough about it, how to build a watershed community, so I'm spending more time researching it..."

"I'm always interested to hear more about successful engagement strategies... and especially in urban communities, where there may be other issues."

"And then connecting-- if we want this well-rounded approach to stewardship, it's connection beyond just those in the environmental field and going into sportsmen organizations and groups as well and businesses... As for a need, tapping into the communities that we can't communicate with because of language barriers right now, so there's that. We do have folks on the board or on the organization that are bilingual, which is great, and that's another connection that we are going to be tapping into in the future too. But it's hard to put it all on one person, so we want to make sure that we are building capacity to be more inclusive with everybody that lives within the community."

Watershed groups will need to communicate in a way that is effective and allows for conversations with people from all different backgrounds. A focus group participant expressed this need for communication to build partnerships.

"Telling their story, marketing, messaging, branding, you know. Communications, I think, is a huge, huge issue for a lot of groups and I think that affects... some groups lack, I don't know if it's the desire or the ability to sort of like reach outside the box and think outside the box in terms of collaborations. I think they're always just looking for environmental people, and you might not know how to sort of reach out to a housing group or workforce development group or a sportsman group or whatever, you know, and just aren't doing that. Like I said, I don't know if that's a like a skill thing or they're just not thinking about it. Both, I don't know."

Science communication

Science communication is an additional challenge and need for watershed groups. It can be difficult to get information from from various studies and projects out to the community. Students and faculty publish research in papers and posters, and the information may not reach the public.

"Getting the information to the public is a tricky, is a difficult one."

"We published a whole bunch of things over the years, some of it's quite good. Even academically, it's quite good! And I'm going to put that in a real big, even academically. Because very frankly, most of what we publish is non-academically acceptable. It's not peer-reviewed. And I hate to tell you, we don't care! And you know what? Nobody else does, either. The minute you start going into a planning board meeting and talking about this wonderful, peer-reviewed, thing. Poof! You're done. They turned you off. It's over. And that's because, even if you bring in the people who wrote it, they're talking so far above the levels of interest of the people in the room, whether it be the board members or the rest of the audience, or town people, no... Most of the time the academics don't talk to the people, and therefore, whatever they had to say, even if it's very useful, becomes useless. In fact, it becomes a negative. Sometimes it's better not to talk about academics. And sometimes it's better not to tout the

three PhDs you have in front of all these people... You gotta make the science something that relates to people and something they care about. It can't be pure science because you did it, you got it published."

Certain key messages may also be hard to convey if studies have not yet been conducted or the science hasn't shown the answers yet. For example, the relative contribution of small streams to the overall health of the Hudson River or the relative health of one particular stream compared to others in the region are not yet known, but this information would help with messaging to municipalities. One opportunity could be identifying a collective set of parameters to better understand the contributions of small streams to the Hudson River.

"Make a set of measurements... there's like a whole list that most environmentalists would agree – you could come up with a list... that I think everyone could agree on, not only those parameters but also the methodology, so they would all be really comparable, and so you could really start to see how all the tributaries compare. And one of the questions that I've always been interested in, and I don't have an answer to it, is how much pollution, in all of its forms, do the really tiny tributaries collectively contribute to the Hudson compared to say the ten big tributaries? And there are hundreds of these tiny little streams... So that if it turned out that it was as big or bigger a source of pollution, then we would be empowered when we go to different municipalities and pitch them on the idea of working with us on these small streams on the water quality and etc. Then we could say, the small streams contribute more to the Hudson pollution than the big ones. It would give our message more strength."

An interview participant observed that watershed groups need to have facts to speak with a collective voice. However, facts don't seem to matter to people, and this can be a barrier to effective communication and action.

"Then all the citizens have facts, and then they are speaking with one unified voice. That's harder these days, because facts don't seem to matter to people. Even progressive Democrats. They are as bad as Trump. It is bizarre. I am not quite sure what to think of this. Except to keep going. People need facts. And stay away from like fear and speculation and rumor. It is sort of the habit now. It is easy to fall into that trap."

Resources needed for capacity-building

While watershed groups want to grow and take on additional projects, they lack specific information and guidance on how.

"So that's sort of our structure, and I want to grow the organization so that we've got more people doing more things... But I haven't really been able to make that happen yet. I guess I don't really know how."

"Like growing in terms of our role and activities. When started we just took the Riverkeeper model, and we folded in some things... and we did citizen science. And we've been doing that for four years. It's time to have a bigger story and I'm not sure how to do that. We did the same thing last year and made progress."

"I'd say that professional knowledge in developing strategy is something that I could use the help of."

Reference documents for new watershed groups and frameworks for roles and structures would help groups think through their tasks.

"...in terms of having some sort of reference documents for the group. And I know when I had initial conversations, it was always said, 'Oh, everyone is so different, it's hard to put something in one document as a reference.' And I don't know if I agree with that. I think that there could be some form of a task list for a newly formed watershed group that, this is what we've seen work in other places. This might work for you, it might not, but at least this is some framework to look at. And we didn't have that when we started and I went to the [Hudson River] Watershed Alliance hoping that they would have something or be a little bit more helpful in guidance, and it wasn't there to be honest... Something to have there and who – just to say, oh, our board is more made up of government, this is what other watershed groups similar to you are out there and these are contacts. That was extremely helpful, too. So just those things that... How I work, I would think would be very helpful for me. I know not everyone works like that, so I don't think it would be helpful for everybody, but personally that was an obstacle I had when we first formed too. Like what do we do? Where do we go really, because everyone wanted to go somewhere else."

Several interview participants also expressed interest in receiving technical assistance from Hudson River Watershed Alliance to support capacity-building.

"It would be great to partner with an organization like the [Hudson River] Watershed Alliance, that is the big thing that the Watershed Alliance does is communicating with watershed groups, providing technical assistance to watershed groups. I hope that's a partnership that can grow or continue."

"Well, I'll say that I'm really glad that you are running Hudson River Watershed Alliance seriously. I think that there is the promise that things are going to, that you're going to create systems, in the way that you do them, that will allow a [regional] organization... to go back to more of what it should be doing. It is sort of a funny thing to say, but I think there is such a need for this organization to exist. We need more watershed groups because that means we have more citizens engaged in the areas... We've got a problem and there's just like a chain of activity and people can help on another. So, I'm grateful that you're there and that it's taking the shape it's taking."

Funding

"I hate to say it but it all goes back to when the funds run out, the funds run out."

"Money. That's the barrier to everything, isn't it?"

Grants

Applying for grants

It can be a challenge for watershed groups and municipalities to stay up-to-date on funding opportunities or how to apply for them. Two interview participants described this as a technical skill that was needed.

"The engineers who advise communities are not necessarily up-to-date on the best wastewater treatment plant operations out there, the newest... And what grants to apply for, or what multiple grants to apply for. The drinking water department in the [municipality] had never heard of the source water protection DEC grant... I've always, always asked for more assistance with understanding what grants are out there, how to apply for them, how to structure the application to be as comprehensive in its thinking as the people who created the grants want you to be. And it's a special skill set."

"Having a better sense of funding opportunities, of new regulations, whether it be statewide, countywide, federal. Any of those kinds of issues that affect us that we try to stay on top of, but there's always going to be that knowledge gap from time to time. Any opportunity we have to improve on those is welcome."

Available grant funding may not be enough for larger projects like watershed plans, and groups need to divide up projects in creative ways.

"Though to be honest, that grant stream, it wouldn't have supplied money to do an entire thing... I think we've been able to pick at some of the pieces related to what one needs to do for the management plan. And I feel like some of the important risk issues are being attended to in different ways outside of a report, such as the culvert study that I mentioned."

Applying for grants can consume limited resources, especially when there is a low success rate. Grant programs may not communicate their selection process or evaluation criteria, which makes it more challenging to know if an application might be competitive.

"Well, it's always about the funding, you know. I mean there are a pretty large number of funding opportunities out there, but accessing that money. They're mostly competitive, so how long can it be sustainable? I don't know what the overall success rate is for grants, but it can't be that high. I mean if you're getting 1 out of 10, what's the end result of that? Because that means nine tenths of the proposals you prepare, you didn't get funded for."

“Well, one thing, from my point of view, from where I sit, the ranking of these things does not seem like a straight-forward or quantitative or scientific process. Some of them, they try to make it like it is but I don’t believe that it is. And I’ve been dumbfounded at some of the projects that have gotten funded compared to some of the ones that haven’t. You’d like to think in the perfect world, if you’ve got a good project, you don’t have to be a creative writer to get money for it. And I don’t even know if it’s so much that. I don’t know if it’s that they’re picking the ones that they hired some high and fancy grant writer. It’s just that I don’t think that the ranking process is straightforward or fair enough or whatever. And I mean obviously sometimes there’s political influence that comes into that.”

The competitiveness of grant programs is a barrier for watershed groups to apply and collaborate on projects.

“My second little peeve is still the competitiveness of the grant process and getting grants. It’s hard. We’re all fighting for money. Yeah, and our [municipal] budgets aren’t getting any better. We depend on grants... You depend on grant money. Or your organization. So you need that. And we’ve got to find a better way. No, I don’t [have any thoughts on alternatives]. I mean, it’s nice to say it needs to be better, when I don’t have a solution either!”

“We used to try to get some of the national, like EPA conservation education awards. We never got one. And when you apply for a national award, you have no idea how much competition there is. ‘We have a million dollars,’ well, yeah, that’s for the whole country. So we haven’t submitted a federal grant proposal in a long time... ”

Focus group participant:

“While we’re on the topic of money, and I just want to point out that ‘cause it’s so scarce, that I really think it’s a barrier to collaboration and partnerships. You might think the opposite is true, there’s like not a lot of money out there is people have to sort of partner up and get together on grants, but I’ve seen the opposite happens. Like everybody just trying to get their piece of the grants to fund their stuff, but I you know, I really think if [funders] had 100 times amount of money to give out and there was EPA money falling everywhere, I could see a lot more, you know, a lot more collaboration and things happening. But I think people are trying to protect their own.”

A focus group participant also articulated this barrier as a lack of access to grants and competition for limited funds.

“...I understand that everybody wants to try to figure out how to help people get more grants. The bottom line is, there’s only so much grant money now. We may be moving into an era where there’s a lot more for a while, but it is hard. It’s hard to go after the existing grants. And some way of making that easier would be great.”

On the other hand, focus group participants that manage grants observed that certain programs are much less competitive now than they were in the past, with fewer applications coming in for watershed work. While funding is available, watershed groups do not seem to be applying for it; this may be related to the barriers they face in applying for and managing grants.

“I just wanted to tell you, like from the back end, our... grants on watershed work used to be much more competitive than it is today. And we used to get many more proposals than we would. Maybe it's the way we framed the grants, but my point is, there seems to be less competition for the money that's available now, at least from our program.”

Applying for grants requires innovative and new projects. It can be challenging for groups to stay on mission and also get funding, without stable funding for capacity-building and regular programs. Two focus group participants;

“There's this sense for these funding sources that in order to reapply to them, you need to come up with some new and innovative project, and there really isn't this just a stable source of funding that these groups can go to to help maintain their work and continue to work on implementing their watershed plan. Or, you know, like they have to come up with a new creative spin on why they want funding, when really what they need is just like a stable source of funding to help them continue on their mission.”

“...More or less that they need to come up with new proposal each time even when the – in some cases, the project pretty much stays the same, but the RFP changes a bit. If there could be a way where some of these grants you could apply for something that is, you know basic needs or you know, project-based but that it could be in the queue, and if it doesn't get funded one round, it could be considered the next time, without having to redo it.”

When applying for grants, watershed groups need to communicate how they are moving their work forward and how a specific project relates to their overall goals. Grant-writing support and storytelling are needed, including knowing how to package projects in a way that funders can understand. This relates to communication and having a clear mission.

“When [a funder] is getting grants and looking at prospective projects, I understand that there's this, like, we can't do the same thing over and over again. But I think seeing projects that have clear goals in mind, and can deliver on something... that that is easier for organizations or for the funding agencies to get behind. And so, it's one of the things – and I'm not saying this is every group, because there's certainly groups that are doing a great job of this – but I think there are some groups that really aren't able to make a narrative that shows progression. And I think you can always show progression, even if you're doing the same thing over and over again, if you're skillful at packaging and just describing what you're doing, and making sure that it is leading towards some focus. And so I think there's a couple of groups I've worked with recently... they just want to do the same thing over and over again. And that's fine if they can find some other funding, but it is really hard as a funding agency to say what's accomplished

from that. We have our own reporting to do. So I think that's something that – and I don't know if that's help with grant writing, but I think it also goes to the big picture... how do you run a group in a way that moves it forward in some way or another. ...I guess it's probably two things. I think one thing is just grant writing, just that skill of being able to package what it you're doing in a way that's sellable. But I think the other is, I don't know if it's focus or if it's mission – working towards a mission.”

Grant priorities

Grant funding priorities may change over time, making it harder for watershed groups to secure funding for their work.

“Lately, Estuary Grants are more kinda focused on the Hudson.”

“For so long, for the last ten years, we’ve been so supported by the Estuary Program grants, that’s really been a driver of the direction of our research. And now that the requirements have changed slightly, I need to think about what direction to take the research... I’ve been doing a little soul searching, so I will admit that the new ELAP requirements that require an ELAP-certified lab, for at least the bacteria monitoring, has given me some pause. I’m not sure of the direction of my research in the long term. I have a couple of papers that I’m finishing up and a couple of studies that I’m finishing up, and after that I’m actually not sure what the next step is.”

Grant programs may have geographic priorities or restrictions that limit access to funding for certain watersheds.

“But there are still a number of Hudson organizations, including granting organizations, that don't recognize the Mohawk as being fundable or a part of the system, and that's - it's a big nut to crack, but it's part of the system, and if Asian carp get into the Mohawk, it's game over for the Hudson, I'm sorry. So I think my plea would be to ... continue to emphasize how important the Mohawk is, because we need that cross-fertilization between, you know, let's face it, the mass of research and work and analytic expertise is in the Lower Hudson... I mean, someone could also say the Upper Hudson is not as well represented, but nonetheless, the point is it's a huge, huge basin and anything that we can do to integrate everybody in the basin is going to be an advantage.”

“We are not on the Hudson River. So I think, obviously a lot of attention goes to the Hudson River. We’re not in the New York City watershed. So two natural funders, Hudson River Estuary Program or New York City DEP, are not necessarily going to be helpful to us.”

It can also be challenging to secure funding for restoration projects, if the watershed is fairly healthy and not part of a drinking water supply.

"I would say even, what's not working great are restorative efforts, because there's no real funding, because we're already looked at as doing pretty good. So things that had been damaged and stuff like that, didn't get really dealt with either. And funding ended up going to places in [another] watershed, a lot of funding went there because it's based on, you know, a water supply issue."

Certain grant programs may use criteria for prioritizing projects that put certain watersheds at a disadvantage.

"And I hate to keep going back to money, but we have been denied some culvert grants for probably the past three years just because we can't hit the mark when it comes to the way that the DEC prioritizes waterbodies. So, we're kind of hoping this nine element planning kind of supersedes the PWL, which I think it will if we could say, hey, we did this, you know, legit local work."

"Yeah, we do in fact, those ag nonpoint source grants that I mentioned, we've done far more of those in [one watershed], but we did get one for [another watershed] a few rounds ago, and we applied three years in a row and were declined each time for the [the second watershed]. The reasons for that are complex and varied, but that program's really focused on animal units because the more animal units, generally, the higher the runoff concerns. And so the kind of agriculture that we have in Southeast New York doesn't necessarily rank well. So we put in a proposal to do a project on a goat farm with 50 goats. That's the equivalent of like 5 animal units, so we're competing with dairy farms upstate that have 1,000, 2,000, 5,000 dairy cows, so we've been frustrated that we haven't been able to get funding for some of these [first watershed] projects. But what just happened is our state agency in Albany, State Soil and Water, they just added an implementation component to our AEM funding... That's Agricultural Environmental Management, is the name that they give to the sort of umbrella approach that we take to farm planning. So the first thing we do with a new farm is what they call a Tier 1 where you just ask the farmer general questions and then you progress to a Tier 2, where you ask more specific questions based on the type of farm it is and walking the land and the farmstead and looking for potential issues, and then you progress from there to a Tier 3, which is a plan to address the priority issues on the farm, and then Tier 4 is implementing that plan. So the implementation is the part of it where you need construction funding. So they've given us money for the planning part of it for many years, but in 2020, for the first time, they've added a funding component for construction, and they've given us the latitude to decide where we want to use that money. So we decided to use it to do projects on four [second watershed] farms that have not been successful in getting funding through the regular competitive ag nonpoint source program."

While certain grants have incentives for environmental justice or hardship communities, municipalities with funding needs may not be low-income enough to get certain grants.

"...we got told daily what an impoverished, poor community we were. But yet when we try and get on board for some of the grants and the water things or whatever, we are told what an

affluent community we are. ...[W]e actually are okay with the median income. So that's why we are getting locked out of some of the resources. There's communities a lot worse off than us, and they are getting funding."

Managing grants

In addition to applying for grants, managing them can be a significant challenge for small and volunteer organizations. Grant programs that pay through reimbursements require watershed groups to have funding in hand to make the payments first.

"Grant writing, we've done a bunch of it, lately more, through other organizations... And it is hell. Getting it together, getting the answers right, coaching the right people... And then administering it is even worse, because most grants will reimburse you after you've spent the money, and if we didn't have money to spend in the first place, that's a real challenge. Funding is probably our biggest ongoing challenge... You need to have funds to get funds, and that's a big gap for us. When you talk about what can watershed groups do about that, maybe there should be some kinds of programs and some kinds of funding that don't require you to have a huge amount of funds. To start with."

"And additionally, for groups that get it, it's a program that requires you to lay out the money and you get reimbursed. That's not an easy thing to for many organizations to do. You have to front the money, and so that makes it hard."

Grant administration and reporting is also a challenge. Government grants require detailed reporting, and grant funding does not cover administrative time. This becomes a barrier for watershed groups to apply for grants, because the process is so challenging and capacity is limited. Having administrative staff or resources would be very valuable. One interview participant described this as a profound burden.

"It's profound... There's no better word for it. When you add it all up, the writing of the reports, the accounting, the saving or the losing and then tracking down of receipts, the state DEC – and it's good that they're insisting on competent management of the grants they give. But it is difficult to do it. They insist, for every single even tiny little expenditure, not only an invoice, but also proof of payment... So, six months down the line, I'll decide, okay I'm going to put in for a reimbursement, because it's all on a reimbursement basis. So, I have to shell out money from my own pocket, which can be \$50,000. It's a lot, because I have to hire architects and engineers to do a lot of this work, so I'll have lots and lots of bills, both the big ones – but those are kind of easy, you get a nice big invoice and you have one big proof of payment. Then for every tiny little thing, all the staples and the printings, they're hundreds, all the little things. All the equipment, all the supplies, blah blah blah. And so, I find myself trying to track all that stuff down after the fact. Going to the Home Depot history, one by one turning the receipts into a PDF and then appending that into an Excel file, and then for that particular expenditure I go into the bank statement in PDF, highlighting that one line in the bank statement, creating a PDF of that highlighted, and then appending that. You just multiply that by hundreds, and you can't even

get paid for any of that [administrative time]. So, hundreds and hundreds of hours... It's kind of mind boggling, the administrative burden... I'd rather be doing fieldwork or measurements or some kind of data analyses or writing papers or interacting with municipalities or whatever, giving talks or whatever it is, a substantive part of the work. If I could only flip the 90 percent and ten percent so that 90 percent was that stuff and the ten percent was administrative, I would be a much happier guy, but it's not like that. And I suck it up because at least doing that 90 percent allows me ten percent, and it gets the projects done."

"So capacity, it's always an issue. And I think another issue that is difficult for nonprofits or small [organizations] like ourselves is the financial reporting and grant writing, big issue. I can write a grant, I can tell a story pretty good... Applications are much like grant writing, you need to have budgets, you need to explain projections, you need to say what you're going to do and how you're going to do it. So that's one thing, but reporting on it, because I'm not an accountant. All those little expenses and where they come from and the matching funds. So that type of reporting is very intensive, and as you know the New York State Regional Development Corporation grants that are out there, they are, I hear – I haven't even gone because you have to have the same website. So that type of setting up the website, having the treasurer, reporting, keeps us away from the big money. State grants require a lot of information that I don't have the time to do. I could but then I wouldn't do anything else. I do find it's just as easy to write a grant for 2,500 as it is for 50,000, let's say. But that's a big issue."

"And I would have to confess that I do not love the administrative aspects of this work. I don't mind writing grants, because there's a creative component to that. They're difficult, but you grind through them and you have a work product that you're kind of proud of. But oh, I hate accounting [laughs]. The accounting and bureaucratic requirements of operating under state grants is pretty awful and it's very time consuming."

Managing many small grants can contribute to staff burnout. In some cases, the effort required to administer grants may be disproportionate to the funding that's actually available for programs. It can be a challenge to balance workload and project deliverables.

"We're pretty heavily grant funded, and so therefore we're dictated by what the deliverables of the grants are. So, when we're juggling a lot of very small grants, we still have to perform pretty high for these small grants, and so one of the things that we have kind of struggled with is work load... We also recently found out that we received a very large grant to do restoration work... That's also going to require some RFPs and contractors and so I'm going to be really administering these RFPs, that's going to be a lot of work in addition to all the work I was doing. But it will be a lot of funding, so I'm hoping that that means that we don't have to be so beholden to these tiny grants that really suck a lot of time and resources in a disproportionate amount to the funding that they provide."

Minority- and Women-owned Business Enterprise requirements are also a challenge. While for watershed groups it may be challenging to identify firms to meet goals, it is also challenging for businesses to receive this certification. State grants require working with MWBE-certified

entities, and if it is difficult to get certified, it limits the minority- and women-owned businesses that can be partners on grants. One interview participant shared the experience of working through this process.

“So I looked into that and realized that, yeah this is the thing to do, because now in my work with nonprofit groups who might be applying for grants, if they’re partnering with me as a Minority- and Women-owned Business Enterprise, grants will often times look for nonprofits who are working with minority businesses. And you actually get extra points in your grant applications. So I went through the process of getting myself certified as a woman-owned business, which was, again, a very daunting task, and still is. You get your certification and sometimes it’s good for two years, sometimes they change it to a three-year term. And then you have to renew and renewing, again, is no easy task. I seriously can show you the drawer full of paperwork just for the application and the renewal application. I sent in for my renewal application in 2017. I did my due diligence, I knew when I was going to expire and I said, time to get that rolling. And do you know that I just got it, and it’s 2020. Is that crazy or what? And I would keep following up and following up, because I was working with nonprofit groups saying, I’m a minority business owned enterprise, but I don’t have anything to show, my certificate has expired, and I was concerned that a group might decide to partner with me and put in an application and then somebody is looking at applications saying, ‘Wait a second, we don’t have [this business]’ because my thing had expired. And kept after them, it’s like, when am I going to get an answer about this renewal? And I seriously just got it... and I kid you not, ‘Certificate awarded October of 2019,’ although the renewal was two years prior, so it’s nutsy. But anyhow, the other piece of this puzzle is that when I first applied for this years ago, they come to your place of business to make sure you’re a legitimate business person, and they’re looking at your records. And the information that you have to provide to them is really extraordinary. It was like the last three years of your tax filings and your copies of your lease and copies of your insurance. It’s just an astounding amount of paper that you have to give them. You can do all of this online, of course, you can upload things, but it’s really daunting. Checking accounts and huge amounts of information. And they did send someone to scope out your place of business. But the renewal is just as daunting, and it’s really an amazing task to get that application put together. But the other thing that I wanted to point out about this whole process is that I am not registered with a local... office. My stuff is in New York City, and I asked them about that... and the answer I got back then was, “Well the [local] office is overrun with applications and so yours came to the city.” Apparently [it’s a workload issue]. The other piece of that was when I get information about jobs that I might want to bid on, it’s do I want to bid on the bridge down in Manhattan. It’s like I’m in some kind of weird categories, as far as the kind of work that I do... I’m under several different categories, cause there’s one place to put my kind of business issues – education – you can’t use the word education, and it’s really so complicated. But I get these job bids all the time that are for things that are well beyond what [my business] can do. Sometimes I think I miss out on opportunities for jobs that are available. It’s a very complicated process. And I’m still with the New York City gang, and they want me to bid on the Jacob Javits building, so it gets a little crazy.”

State grants may also require a competitive bidding process, which can add to the administrative workload.

“For example, the first phase of [an implementation] project was done through a state competitive bidding process... So we put the project out to bid, we hired a contractor. We had the contract and completed the work, but then, for a variety of reasons, I would always try to avoid state competitive bidding if possible, because there’s so much outside your control in terms of the contractor. So in the second phase of the project, we structured it through – rather than us contracting with the construction contractor, we did it through the AEM process, where the farmer hired the contractor and then reimbursed the farmer. So that gave us a lot more flexibility to hire local contractors and there were some other cost-saving aspects to it, and it just worked a lot better.”

Focus group participants also observed a lack of capacity for watershed groups to apply for and manage grants. Grant specifics may change year to year, and it’s hard to keep up.

“I was also thinking in terms of what's missing or what's a gap, is the capacity for some of these groups to apply for a grant to get the funding to do what they want. Because they also might not have... a fiscal sponsor. And so, to meet some of the gaps, they need to get funding, but they don't have the capacity to get the funding...”

“Capacity for obtaining funding, capacity for even when they obtain funding, or they have a fiscal sponsor, for all of the administrative work and roles that come with funding, you know. They're necessary, but they are also a huge, huge undertaking, and they’re sometimes not paid for by the funding, so like an organization or the watershed group has to find other funding to cover that time. Or you know, volunteer.”

“One is definitely access to funding and using it properly and having a plan, like a real tangible plan, once you actually get the funding.”

“I feel like that often the rules and the grant funding, specifics changed a lot and so that is really a challenge. So I think on both, you know, there's a challenge of changing people, the burnout on that end, but then there's also this like every – It takes a year to get ready to plan for funding, and then if the funding changes or comes in a different way you have to adjust.”

Having work funded through grants and pre-defined deliverables can be challenging when there is a crisis, and watershed groups need to quickly adapt their work. Funders need to be flexible enough to allow for changes to workplans, if a crisis does arise. Flexible operational funds are valuable.

“We used to be a fully hardwired organization and dwindling with corporations. We are now at 85% with grants and contracts. So when Irene happened, our hands were tied, because everything was put into grants that didn’t address something like a 500-year event. Luckily, during Covid, because it was worldwide, most funders gave a lot of flexibility and said, ‘Ok, you

all have flexibility in your deliverables,' so we were able to take that a bit. But that's the exception, as corporations go away and everything becomes grant funded. Without that flexibility, you have that challenge. And I know a lot of the local foundations in the Hudson Valley are addressing that by providing operational funds and saying, operate within these bounds and we'll stay within communication, but we're going to give you a relatively flexible chunk of money, and that is kind of what we need to be able to address things in the watershed space and groups."

Need for capacity-building funding

Building capacity and staff with grant funding is a challenge for all organizations. This is the case for watershed groups, along with organizations and agencies that might provide staff support.

"We've got three people here, and it's hard to build staff on soft money, so that's frustrating for me. I think there's a tipping point or a sweet spot there, somewhere between not being too fat, being lean and mean, but I think we get a lot done for having three people. But clearly, we could get more done if we had more people but I just – building your capacity with the kinds of funding opportunities that are available to us is very tricky."

"And we've been reasonably successful in terms of getting... grants... I would say I've been unsuccessful making a living out of it. All of these project-related grants, the money pays for the project, but doesn't really pay for salary. I make a very little bit off of some of those grants, but it doesn't pay the bills, and in fact I end up probably putting more into the work out of pocket than I get back out, which is frustrating.... when you divide it through by the number of hours, it's pennies."

"There's always barriers. There's no easy path to get from point A to point B. I think the biggest barrier is time. Everybody's busy. We don't have the resources. We're dependent on grant money to also help us get resources so that we can build an organization. Independently, the municipalities aren't chipping into this. We're depending on grants to help us. And that grant barrier is huge. Right? ...[T]hat's one of the examples of why this grant [application to hire a coordinator] is important, so that we can build an organization. That's a perfect example of one of the things that we wanted to do. Because that coordinator can help us do a lot of things. If someone is now dedicated their time in that direction."

Grant funding might assist with capacity needs in the short-term, but watershed groups will have to plan for longer-term solutions.

"I got a... grant that pays two students, and their main goal was to help build capacity for the [watershed group]. So, a website, run some meetings, handle all the emails. What a paid staff person would do. Which was great. But in hindsight, again, I think it was actually detrimental, because when the students are doing all that work, everybody else stopped doing work. And when the students' grant ended, and they stopped doing work, nobody else stepped back up. Since the grant has ended, there has been zero activity... And the students actually worked past

when they were getting paid. Because they were pretty committed to it. But at one point I told them, I was like, 'Y'all have got to move on. It was great to have you here, and please remain a part of the group.' And I'm hoping that they will... There were three or four people in the group who wanted to do this [program]. And I was like, 'Great!' And they were like, 'Well can the students do XYZ?' And I said no. They don't work for us/you anymore. You can ask them as a colleague, but you're going to have to take the lead and they would help you as another member of the group. And they just never did... So, it was very frustrating."

Focus group participants also discussed the need for small capacity-building grants.

"I've been asked a couple of times recently by watershed groups for small grants, so something much smaller than and less onerous than what the Estuary Program, say, could provide. And I don't have an answer for that, but I do know that it's something that people feel like in order to build capacity." "It is!"

"I would love to see the state fund grants that would keep that kind of staying force behind... I know that the state was central with helping the Wappinger Intermunicipal Council sort of get started, put forth a way... funding the kind of leadership... and there's been different forms of it, and I don't know exactly all the different players... I know that Barbara Kendell played a role and that Cornell Cooperative has received the benefit of some grant funding that the Wappinger Watershed Intermunicipal Council got. And so I think that if we can get the state to sort of make a bigger commitment that would keep it in place and that would be very useful especially in a home role state where that isn't the way our political boundaries are set up, you know, not by our watersheds."

Watershed groups need diversified funding and support to build capacity in a more sustainable way.

"Just having sustainable funding sources, and I think that is something that we will have to think about going forward. ...[I]t would be good, moving forward, to not have that work of the [watershed group] completely dependent on one organization alone. ...[I]f you put all your eggs into one basket and something goes wrong, then you lose the traction of the [watershed group]."

Municipalities also need funding to increase their capacity. While grants can support capital projects, they often can't support ongoing operations. This can be a barrier to implementing watershed projects. Focus group participant:

"One of the challenges is we talk about how the biggest difficulty is whenever we have funding. When funding is available for groups, then that's kind of the mana from heaven or the magic that makes things happen, and I certainly get that from a municipal setting. But once they get a grant to launch a watershed plan or once they get some money to do Trees for Tribes or they get some money – In one case, we're trying to get some money for them to work with a machine to harvest water chestnuts. And the hardest thing to articulate to a community is the money is

available for capital projects and funding projects. It's not out there for operations. So for us, a community that is going to go out there and have a dedicated program to remove invasives, or to do sampling, or do post-construction compliance monitoring for sites, or make sure to inspect construction sites, are all these obligations that communities have, and these ideals that they would like to be able to implement in their community. But the thing they always come back to is that we don't have the financial resources to sustain this project in the way that the recommendations come together. So can I get \$100,000 for a mechanical harvester? Absolutely. Can we work out a way to dispose of the material with a landfill? Yes. Can I park it at my town garage? That's a possibility, but we need to work on that. But in order for that harvester to be successful, I need to have it out every day for one month in the summer, and that money to operate that machine I don't have in my budget, and I don't have the staff person from the budget. So we have watershed groups that are knocking on the door and saying, buy this machine, implement this program, buy this land. And the municipality continues to push back and say, I don't have the operational capacity or funds to be able to implement this project. So that's one of the biggest obstacles we have when it comes to communicating to communities about long term sustainability of watershed plan goals."

Fundraising

While fundraising could provide a source of operational funds, there are also barriers. Some watershed groups raise funds through membership dues or selling merchandise. However, connecting with donors and asking for general donations has been a challenge, especially in areas that are not particularly wealthy.

"No one is comfortable asking for money. Number one, underline, boldface font."

"I think we need to do a better job recruiting big donors... I think they're there. I think we haven't found them yet."

"So that's an issue, I'm not a super outgoing person. I'm a little on the shy side, to tell you the truth, and that sort of prevents me from just getting out there and starting a membership drive and fundraising drives and so forth. I want to but it's not what I do naturally. What I do naturally is the science."

Securing financial support from other stakeholders that value clean water, like breweries and marinas, could be an option.

"And I think that one of the big challenges that we have potentially is engaging primary stakeholders to help financially. And that means the marinas or the breweries, it means if you value clean water, we need you to step up. And that dialogue hasn't happened yet, and I think we're pretty close to the point where we can make that happen, and we should make it happen. But that's a lot of work..."

There are also administrative challenges to fundraising. These range from opening up a bank account to financial reporting and managing a donor database, and relate to watershed group structure and capacity.

“So maybe this year’s the year to put together that, ‘Here’s who we are.’ Get a bank account. I don’t know how you do that, so these are some questions that I have as a – we’re not an anything, then how do you open up a bank account and ask people for money to put it in there? And then we’ll backtrack and get some help from people on writing the right kind of letter to that. I guess [another watershed group] got a system set up... where they send out a letter once a year and so they get some funding.”

“Yeah, so we have no bank account. The [watershed group] has no budget, we run everything out of [the college]. And so we have a little bit of an issue, because [the academic institution] is a 501(c)(3) and the [watershed group] is not, but we don’t get any money.”

“You get somebody to do a donation for a gift card and that takes just as long as getting a donation of \$500 for something else. So that’s an issue. But then reporting is a pain, I find. ...[W]e have a bookkeeper. But the treasurer that was there before didn’t set it up to do reporting for grants. He set it up to check donations and databases. Oh my god, database management is a disaster for everybody... We have a bookkeeper who does QuickBooks, which you can get donations, but what I like to find out is if somebody comes to an event or they gave us money, when did they give us money, what their history is. And any database is only as good as the person putting it in there. And if you don’t put a capital on one name, it comes up as a different name. And database entry is boring for a lot of people, but we have one woman who’s doing it. And it’s been a few different people. So, database entry is an ongoing challenge, let’s say. To get people’s names right... When was the last time that they donated? So now we have that done, but it’s still a challenge to say okay, do they want to be Mr. and Mrs. or do they want to be Dr. and Mrs.? And do you send it to their summer home or do they want it up there?”

While some watershed groups charge dues, others are concerned that it might give municipalities a reason not to participate. It’s especially a balance when people are also donating their time.

“That’s one of the reasons why I have kind of said all along, we can’t start charging dues. We can’t give communities an excuse to say, ‘No, I am not coming, because we can’t afford even a small amount of money to be able to be a part of this.’ You have to show them that it is going to be beneficial for them to invest the time as well as to participate. Because you know, people who were doing the job of mayor, supervisor, CAC volunteer. People even if they are getting paid, aren’t getting paid a lot. So, their time is their most valuable asset and they are not always willing to give their time to something they feel is an absolute priority.”

Funding Needs

Staff

Watershed groups expressed the specific need for funding staff, especially in a full- or part-time coordinator role. This would help overcome the barriers around capacity, and help groups define a more sustainable organizational structure. Depending on the group's current capacity, this could include a part-time coordinator, a full-time executive director, modest funding for steering committee time, or adding to additional staff with a more specific role, like an outreach coordinator.

"I think it would be in our best interest, at some point, to try to look at getting funding for management of keeping us going. Because while it has been working as a volunteer group, I think long term, if we are going to continue to exist and be pertinent to get problems solved, we are going to need money to do that. And it's just a matter of getting the participation as well as getting the source of the money to be able to have, let's say, one meeting a year dedicated strictly to getting watershed groups together from the Hudson Valley, like the [Hudson River] Watershed Alliance does. You know, to try and get things and people working together on a local basis. And that would be something that might be worth pursuing if people on the working group and on the executive board decide that it's something they would want to be able to address and follow through on."

"I think well, I mean, the obvious one is money. I think there's always a lack of funding and... having money for a coordinator, is a key thing, 'cause it takes so much time to keep people engaged."

"Just money to hire that [staff] person I was talking about... Most groups don't have a hired person, right? ... Yeah, I guess there's not a lot of money for that, probably. Hard to find."

"The fact that... the steering committee are able to do what we do is because... we're all self-employed and many of us come from creative backgrounds and we're used to living on a shoe string. But there's no budget for this year. And then finding the time. Because we all have all the other things we need to do to – so internally, I think it's that, it's the technical support for how to kind of build the group up in a way that's more stable, more substantial, can bring more people in... If what's its gonna take is for the five of us that are most involved right now, to a certain extent, take this on as a part-time job, which is what it is. For that to be, so that we're able to sustain ourselves, and not constantly having to juggle and drops balls that we have been."

"But our new energy that I am describing here has to do with the fact that I was hired, and prior to me no one was really doing this job. [The previous staff person] was doing it kind of as a side project, because her focus was on other stuff. That's just to show that up until 2011 there was sufficient funding, and as soon as the funding was gone, the work of the [watershed group] was

gone as well. We had multiple stewardship groups that just fell apart... So yeah, so just having sustainable funding sources, and I think that is something that we will have to think about going forward."

"...what I'd like to see is that we are able to have enough money and fundraise enough money to hire a real going rate for a full-time executive director."

"I think that help with identifying good and strong funding sources for the type of work that would do would definitely help. For instance, if we could hire someone to be specifically in charge of community outreach, stuff like that."

Students also need funding to assist with watershed work. An interview participant from an academic institution noted that if there was funding to support student work, there would not be institutional barriers.

"And then, of course, always funding is important. Funding is really important for this work because as I said, I always want to pay students to go out in the stream with me. I'm asking them to go out, to spend their summer with me, to go out in the rain to be in close contact with fecal indicator bacteria. I always want funding so I can compensate students for their work... I would love to have a technician staff person, because students are great but there's a lot of turnover... It wouldn't even have to be a full time, it could just be a part time staff person that can help maintain field equipment and the loggers and all of that kind of stuff. It'd be really helpful."

"We're looking to get funding to have an intern collect and spatially map our data to use in updating our watershed management plan or our kind of informal ones. We're also looking at applying for grant funding to expand our educational programming."

A focus group participant also noted that funding was needed to increase staff capacity or hire contractors for specific work.

"The first thought I had when I first heard the question was money and power. Meaning more money, which could translate to staff capacity or you know, ways to have people, resources to do things, or hire consultants to do specific studies."

Watershed group operations

Watershed groups also spoke to the need for funding operations and organizational costs. These include graphic design, printing, room rental, insurance, taxes, merchandise, and office space. A focus group participant also expressed that having an office space is an important aspect of legitimacy.

“Ideally, if we could raise enough, having an actual physical location that we could maybe share with other organizations would be incredibly helpful. For reputation, for ease of organizing, for you know, having our meetings in our own office would be amazing.”

“The aforementioned having some more money for- we don’t have an office. Having some money to hire the right staff, that would be very helpful, I think.”

Water quality monitoring

Water quality monitoring is an important programmatic focus for many watershed groups, but can be expensive. Funding and resources are needed to sustain this work. Having an effective monitoring program requires consistency in sampling across the watershed area over time, and the costs add up.

“I think money. I don’t want to be the one to – like, everyone probably says money. But most of the problems that we deal with are funding limited. And so most of the issues related to water quality are primarily related to monitoring and understanding where we are, and that costs money. And I think that everybody knows this, but I think from the perspective of the public it’s under-appreciated... And so it’s money and it’s time and it’s everything else. And I think if we had more people and more people and more engagement and more money, we could make a bigger impact.”

“Frankly, we have a little bit of money now, because of the generosity of a donor, to do some water quality testing, in a couple of spots, chemical testing... And we have to send things to a public lab. Which is for profit! They need to make a profit, too. We’re gonna have to really watch what we do, because in order to do this project properly, we need to take samples every 2 or 3 weeks, from April 15 to October 15. That’s a lot of samples. Can we do one spot? Is there any hope we can do a second spot? I don’t know. I haven’t figured that one out yet, entirely... So we need access to professionals, people who can really do that stuff, and aren’t going to have to charge us two arms and a leg for it.”

“I don’t have any more funding to do bacteria monitoring in the [stream], and I actually don’t have any loggers out right now ... But this summer with funding from [the academic institution], we’ll reinstall the loggers... But to do the bacteria sampling in the [stream], that’s more expensive than you can pay from internal funds at [the academic institution].”

“But the water quality piece, I think that the [watershed group] really should be focused on water quality. And that does turn out to be a money issue, a funding issue. Because with all the river miles that we have, my god, where do you start? So we know where we start, we’ve been doing the testing, our people have been doing the testing. But it’s just really, I think that with anything, you need consistency. You need to be able to say, from here to here, here’s where we are, and here’s the changes... I think it’s [funding for] both [person-hours and supplies], it’s both for sure. There are person-hours related, of course, to going out and getting the samples and bringing them in.”

“So education is a big part, but we also have to put the science there, and the problem being is that the science, it’s very expensive. So to have real testing is \$10,000 to \$20,000 a year and to get that expertise is difficult. We have someone great who just joined the board who is a water quality specialist retired with the DEC. So we’re trying to use him to have all the water quality information underneath him. Even the simple stuff like Adopt a Stream, where we’re just getting kids and people out to do very basic testing... But at least it gets them engaged and makes them think that every little stream is important.”

Certain requirements of state grants for water quality monitoring can be a barrier to receiving that funding and providing training opportunities for college students.

“I would love to get more funding to do post [construction] ...monitoring. I’m just not sure – there’s no obvious place to go for that funding... [B]ecause of the ELAP certification [for state grants]. The analyses would need to happen in an ELAP certified lab to do the post monitoring. I guess I could apply for funding to do that work and send the data off to get analyzed. So I could apply for a grant, but the students wouldn’t be able to do the lab analyses, which is one of my major goals of these projects... I think the ELAP certified requirement is certainly a big barrier. That’s a big one. But it’s not necessarily a barrier, it’s just going to take some strategic thinking about what next steps are going to be and alternative sources of funding.”

Academic institutions also need grants to support watershed priorities. Researchers may be used to working with grants for scientific research that are orders of magnitude higher than community groups, and there are rewards for securing grant funding within an academic institution. Academic focus group participant:

“It’s just a fact, money matters, and I’ve sat on these watershed group meetings and we’re angsty over whether we should be sampling this site or this site because it’s going to be another 10, 15 bucks... You think you’ve got to be crazy, we should be talking about, for at least water quality, a pretty accessible money that makes this accessible and doable in academia... So if academic institutions are allowed to capture grants, then all of a sudden this is no longer just like hobby on the weekend, it’s actually something that’s moving stuff forward, even if the money is just moving through the institution and out to the watershed groups, but it matters for promotion and tenure and everything else, if academics are allowed to capture money to move some of these things forward.”

Focus group participant: lack of funding for water quality monitoring. ELAP as a challenge for watershed groups to get funding for monitoring.

“The biggest gap I see is getting funding to do [water quality monitoring] as a watershed group. I think it’s become a real challenge, especially with changes around ELAP certification over the past couple of years.”

A lack of funding to continue monitoring and working with municipalities is a barrier to help make sure that information is used. Without follow up support, actions may be limited.

"We did monitoring, we did a snapshot study... There were problem areas, and I shared all of that information with municipalities. And the thing that I never knew was, did any further action occur after I gave them the data. We might have been able to learn that on our own, had we been able to continue doing the testing and monitoring that we were doing. I hate to say it but it all goes back to when the funds run out, the funds run out."

Implementation projects

Municipalities have limited budgets and need grants for implementation projects. They are extremely limited in securing funding for projects through taxes. Municipalities may partner with nonprofit organizations to open up additional grant funding sources. There may be limitations for the role of a watershed group in implementing large construction projects, given their small size and capacity.

"It's great that the Estuary Program has some funds, and that's certainly been a great help to us. But you know, it's just all these little municipalities. There's a two percent tax increase cap, things like that, so they don't have a lot of extra cash going around, that's it. So anything that we can find that we can do with grants is really great."

"Because one of the biggest frustrations of being [an elected official] in a community of only 1,400 people and 750 households, is that any time that there is a considerable expense that has to be dealt with, in order to do it, you have to come up with funds that sometimes are not available through any other way except by getting outside help. Without trying to tax local residents back to the stone age to get things done that are absolutely necessary."

"Our goal is related to our biggest challenge, which is getting funding. It's just really, really hard to get funding for the work in that watershed, in particular... So, I'm really hoping that once we get this nine-element plan on the ground, that will remove a lot of barriers to the work that needs to be done."

"Funding, to a certain degree. A lot of partners are doing work within their existing funding, but our larger long-term plans need larger amounts of funding... Funding for projects. ...[W]e need to do a feasibility study in relation to that and then design the construction. That's not something that the [municipality] can accomplish on its own, so we need to apply for funding. We've been doing location by location plans as well, and implementing what we can."

"So that's the other major next step is identifying a lot of money, because it's going to take a lot of money. It's not something you're going to be able to do with a volunteer group or without a serious project, and really offering people money to fix them and giving them some support, or giving municipalities some sort of way to support their residents in getting them checked and/or repaired."

Funding is needed for infrastructure improvements in particular, including flood mitigation, septic system repairs, wastewater systems, and drinking water systems. There may also be a

need to consider new structures and incentives to solve tough problems more creatively. A focus group participant also discussed the need for more reliable and potentially innovative funding for stormwater infrastructure.

“Well, flooding, it's just so super expensive to do some of these projects... Flood mitigation is a big one. And it's an expensive one.”

“The sewer overflows are a big one. And, of course, that's a big money issue to repair. That's not an excuse for not doing it.”

“We pretty much know, based on... water sampling, we can pretty much tell what the source of pollution is of fecal coliforms in the water. They mostly come from two towns upstream, and it probably has to do with very old sewage infrastructure, with very bad stormwater management creating cavities under the infrastructure, and then the infrastructure just cracks. So do those towns that have neglected their infrastructure, do they have to carry the cost? Do you want to create some type of system that the towns would have the incentive to not just solve the problem as it impacts them, but think about the watershed as a whole? That requires a different political reality. So yeah, I would say that that is the main challenge achieving the objective.”

“We've been fined gazillions of dollars [for wastewater violations]. And it's from decades of mismanagement at the government level, not foreseeing that the pump stations aren't going to last forever, the population is going to increase, you're gonna have more damage done to your natural resources. You need to find a way to fund what you need to do to improve upon those things. It was never done. So we have problems with flow, and when it rains, we're in trouble. We've been slapped with fines like you would not believe, which I have been very vocal about that. And I've said, listen, I understand, you have to have rules and monitoring, and you have to have a way to slap people around to get them to do the right thing. I get it. But, when you know you have a community that wants to do the right thing and has no resources to do the right thing. The money we have paid in fines, we could have used that to upgrade the two pump stations that are always failing. But we can't upgrade the pump stations, and pay your fines, and get it right. So what do we do? ... You can't just keep raising water and sewer rates to cover everything. That doesn't work.”

“And it translates right back up all the way through the state. And having the state being able to take on a larger role. That's been pretty crucial, to me. I know when I first came on board, one of my biggest frustrations was the fact that we had a water treatment problem... and therefore the Board of Health was concerned because we didn't have a filtration system. And we were treating our water adequately and we were up to all of the New York State standards for water quality, but going forward, we didn't have a filtration system that could either a) deal with an emergency pollution or something that might happen in our watershed, and b) any microorganisms that could pop up coming in through streams that were not dealt with, through bacteriological treatment that might endanger our water. And that created quite a problem for us, because they were talking about, back in 2011-12, trying to come up with \$2.5 million to make improvements in our water treatment plant. That was going have to come strictly from

local funding. And with 750 households in our jurisdiction, you can imagine what that would have done to the tax structure for the water bills and the sewer tax. And thank god that Governor Cuomo eventually came up with a statewide bucket of money that said, 'oh yes, we recognize that this is a problem not just for [my small municipality], but for Buffalo and Oneonta, and all of these other public municipalities that have water systems in place for anywhere between 70-150 years. And oh yeah, that is much too expensive for you guys to try to solve by yourself. So, we will come up with a boatload of money to be able to try and give you that opportunity.' And that didn't happen... until the last 3-4 years. So, we were facing, as a community, trying to deal with, 'OK, we know we have to do this, obviously as a water provider we have to make sure that the water is safe and is going to remain safe. But how are we supposed to afford to do this?' And the state is the one that came through. Because I was told in 2012, oh no, there is no funding available, because our median income is too high. We don't qualify for any grants. Or for any outright funding that is not loans that have to get paid back or whatever. So that's made a huge difference for us, and the state rightfully has said that, 'Well, if we are going to give you money, you need to make sure it's not only used properly, but that it benefits the surrounding communities and the surrounding jurisdictions.' So whether it's done through a shared services grant with the county or now done through the state, which is all trying to make sure that the entire watershed benefits, not just one community along the watershed. And looking at it from that perspective, having a watershed group with a municipal group has been perfect, because it has allowed everybody to coordinate all of those plans and grant applications and other things. And the state's happy knowing that they can not just talk to individual communities but a whole group of communities, and come up with these solutions for these things."

"I just think that we don't quite understand yet how to fund in the concept based on a utility... Stormwater can be conceptualized the same way as a utility district, why New York State has not moved on that aggressively other than in the City of Ithaca? I don't know, but that becomes a dedicated funding stream to start solving these problems, which are often the focus of watershed groups, which would be the non-point source pollution piece, and I don't know the [Hudson River] Watershed Alliance doesn't do advocacy necessarily. I don't know that for sure, but I think a really careful look at how is water quality protected now, and what are the funding mechanisms? Because it's embedded in New York State financing structures, public benefit corporations with water authorities, districts, and to me, that's where we need to be heading, 'cause we're always going to come up against not having enough money. The downside with grants, you know, we've probably all written a lot of grants received grants. Very time consuming, sometimes off topic by the time you're done with it. And I just get nervous thinking about grant money anymore. You know, you want reliable program money to keep the work going in a sustained way. So I think focusing on that as a huge need in New York State, not just Hudson River, I think is really important so that's yeah, I just think that's really critical."

Geographic/Watershed Challenges

The watershed concept

The concept of a watershed may be a barrier for some people, in making the connection between land and water. Many communities look at problems at a site scale, rather than taking a watershed approach.

"I say, once it's in the [river], it's too late. You need to protect all the little streams that people fill up, the wetlands, the vernal pools, those are the key things that are important to the watershed. And if you can get people to recognize that and start to think about it, then you have some impact on the bigger river."

"And so a lot of the environmental issues, their source is in the less dense, more affluent sections of the watershed... and a lot of the problems, because throughout the years there has not been very efficient watershed-wide view of the river, problems were solved locally. Many problems are water quality problems and flooding... every winter several times, and local... solutions like walls or berms were placed in different towns where the problem was. And the water quality and the sediment and the energies and the velocities just end up down here in [downstream municipality]. And the flooding ends up down here in [downstream municipality], so there's also that component."

Large geographic area

Several interview participants described the challenges of focusing on a large watershed, including bringing people together across a large area. Groups may not have the capacity to focus on the entire watershed. Some also expressed the need for multiple smaller watershed groups to cover such a large geographic extent and be more involved locally. This is both a geographic and organizational challenge.

"This basin is just enormous. It takes four hours to drive from one side to the other... I think that we've been highly successful at engaging locally [in one city], but it's 2.2 million acres. What happens up in [a different city], I have no idea... There should be separate groups that are taking chunks of the watershed."

"I know that there are much bigger tribes, but 50 miles... Somebody from [one municipality] coming to [another] for a meeting is doing almost two hours of driving, not including meeting time. So it's just really hard to get together. ...[W]hen we do the sampling, we divide the stream into two segments. We have one group of people out doing the upper segment and one group doing the lower segment. That reduces the total time to like a three-hour commitment... I think the size of the area is a difficulty... And the fact that what's happening in [one municipality] is not very well known in [another] and vice versa. They are close to an hour apart on relatively small roads."

Some watersheds include multiple states, which can create organizational and communication challenges. New York State funding cannot be used to work outside of New York State.

"We work in both [states], we're chartered to work in both. But right now, because more of our funding has come from New York State, so as you know you are required to be focused on where your funding comes from. But we work with [partners in the other state] and we are trying to expand... we have a lot of members from [that state] and donors as well, but we are trying to expand that and expand [core programming], and work with other organizations that we feel have similar missions. What I would like to see is that we're all under one roof instead of just based on geographics and provincialism. That happens with certain organizations -- upper, lower, why do we have two, which one, why can't you be combined. I think that's an issue that needs to be resolved, not only for our organization but for others."

"And, none of this conversation has anything to do with [another state], where a third of the watershed exists. And we don't touch it. We're not there, we don't have any plans to be there. They have a seemingly effective watershed management group... led by a guy who has never in five years once returned my phone calls. But they do good work."

Defining the boundaries of the watershed can also be a challenge. While watershed delineations can appear straightforward, watershed groups need to make a conscious choice about the scale at which they will work. They may choose to focus on a particular area within a larger watershed, for example, if it's more within the capacity of the group.

"I think we, in terms of the groups, are determining what our boundaries are. Are our boundaries a 6-mile stretch that we live in and we get in? Or should we really be thinking in broader terms of a larger geographical area...? Should we also be considering our tributaries...? Where do wastewater treatment plants come into this process? These are all now expanding the scope of what this [watershed group] was set up for. And do we want to bring in wastewater treatment plants? It's definitely a concern. But how do we incorporate that into what we're trying to do? So yeah, I think that's my concern. You can grow, but if you grow too fast then you're not going to accomplish anything. My focus... is to get us focused and get a good cohesive organization running... and then look to expand...."

There is also a geographic and cultural divide between the Hudson River and Mohawk River.

"And so here's the challenge. Many times, you'll look at a map and it'll say the Hudson-Mohawk System. It doesn't say the Hudson, it says the Hudson-Mohawk System. And I don't know if you've ever thought about that in terms of history but what's up with that? Because the Mohawk is tributary, obviously, to the Hudson. Why isn't it just called the Hudson? And there's a historic reason for the barrier and the geographic separation between the Mohawk and the rest of the Hudson, maybe it's Cohoes Falls... The big challenge is partly on your side because most people -- the Mohawk is scary. Partly because it's so big and it's all muddy and whatever. But for the Hudson group to embrace that the Mohawk is going to take work in part on both sides. But there's a big barrier between the two. If you're in the Mohawk, the minute you hear the word

Hudson, people's eyes glaze over and they think, that's where all the money goes, that's where all that attention goes, that's where water goes [laughter]. And it's not clear to me what it looks like from the other side of the fence. But that vision of the Mohawk looking at the Hudson is not me. That's widespread across the basin is, we're our own thing, because we've been left alone and we've been orphaned. And that's often what we're called, it's actually 'the orphaned watershed' [laughter]. So I think part of the challenge is going to be, what does it take the Hudson to engage?"

Watershed groups in the right role for their scale/scope

Watershed groups need to consider their scale and scope in order to have an impact. This relates to the size of their focus watershed, as well as the roles they play. Certain processes, such as nine element watershed plans, may be beyond the capacity and technical skills of most volunteer watershed groups. There may be a mismatch of expectations. Focus group participants:

"What's the scale that's plausible to enable people to feel successful? And what is the scale to the watershed size where people can get their brains around it? We've always oriented towards the smaller streams, you know, what's in your backyard, which typically is part of a watershed that tends to be what people at least see... [Y]ou're always trying to manage money and time, so you want a scale of operation that's going to be meaningful."

"...[L]ike the nine element plan, particularly in that process, the support needed, the level of the intensity of that effort and the expectations at the state level are just totally mismatched with what's available in our region and I think anywhere. And I know some of you struggled with this much more hands on than I have, but it just seems like a huge gap that there needs to be actual resources put into place for experts to do modeling etc. to make a plan like that potentially work."

"I'm very frustrated with like the requirements of that element plan and that this sense that as long as information just checks off a box, whether it's useful or not, and like actually is a plan of action or not, frustrates me."

Certain watershed problems, such as emerging or legacy contaminants, may be too large for a small watershed group to solve.

"...[I]t becomes a socio-problem, social problem more than something that a small watershed group can do to correct. There are, so, we will participate in... the community committee to help advise and oversee the process of and the investigating and cleaning up the... contamination that has occurred. But there is little that we can do to influence the, or make the... drinking water reservoir come back. This is all very technical stuff. Too much political stuff involved with it. A very complicated issue. Law suits, etc."

"We as a [watershed group] have not touched on that kind of stuff. We kind of decided when we did the watershed plan that we weren't going to talk about the PCBs because there wasn't a ton we could do about it. And I think that's really what it comes down to for us as a coalition, as county organizations. I don't know if we see ourselves in a role with the PFOAs and that kind of stuff, or we just haven't found how we could be helpful. I guess we wouldn't be opposed to being helpful, but I don't know how we could be."

A challenge is that in the absence of agencies or larger organizations doing the work, small volunteer watershed groups need to step up. There is a need for water quality monitoring, other studies, and planning that larger entities could be doing. One interview participant shared an experience where their group got pushback from agencies and municipalities when they were asking for their help, instead putting that role on the community members.

"We worked on it, presented a letter of request for help from the DEC. They said, and there were 40 people showed up, the highway superintendents, everybody, 40 people, our base is more like 20, but 40 people showed up for that meeting and he said, 'Very nice, very nice, we would like for you to do the following to help us.' 'No, no, no, we want you to do the research! We're the citizens.' They said, 'No, no, no, we can't, we don't have the time, the money, the blah blah blah. We need you to do it.'"

No crisis to rally around

While having a healthy watershed is a good thing, it can be challenging to motivate people when there isn't a crisis or something to fight.

"And there was never... any real water quality threat or threat of development or something like that that rallied people."

"I was trying to come up with a case that the Walkkill [River Watershed Alliance] was formulated because of the green slime. But apparently, they were formed before that so [laughter] I was like oh well, there goes that case. So, it's like the [watershed] is not, it's not poisonous and there's [not] signs up saying you cannot touch the water or you're going to die, your dog's going to die. You know, so we don't have an emergency. So, therefore getting people rallied around it is a little bit more intricate."

"It may sound like a nonissue, but the fact that the water quality is high can make it difficult to attract volunteers. Volunteers love to jump in and be the white knight, and with the [watershed], we don't really need a white knight."

A focus group participant noted that while it's better to be proactive and protect watersheds, it's also harder to get traction to start a watershed group.

"I think one of the challenges is with watershed groups is how about we start encouraging them to form before they're forming because there's an issue. We need to take it from being a

reactive concept to being proactive to, let's protect what's there.... I know there's still the disconnect with the municipal officials and that is hugely political, but I think it's easier sometimes to get people to appreciate what is there and talking about the beauty of it and then maybe when there becomes a threat, then they're more willing to have those that open mind to say, you're right, we have this treasure in our community and we need to protect it and it's under threat now. I think maybe... trying to switch the way we operate as a human race of where we're going to wait until it's bad until it's damaged to try to fix it."

An additional challenge may be getting people to care and take action on a waterbody that is not part of drinking water supply. There may be a perspective that it's clean enough.

"Believe it or not, one of our members told me that he was speaking with the past supervisor of [a municipality], and that supervisor said, I can't paraphrase it exactly, but he said something like, why should I worry about the [stream], it's not drinking water. So I didn't get a chance to correct the supervisor, but I did tell the person in our group. I said, the [stream] flows into the Hudson... We have a responsibility, I think, to try and help the Hudson, regardless of whether or not it's drinking water. Because people say, well, I know I don't drink that water, I can get water from the tap, and it comes from sewers and it's cleaned before it gets to me. But people are fishing in the [stream] and they don't know what's in it, I'm sure that's not very safe. Sometimes people fall into it, and I know that's not safe because we've found E. coli in the [stream]... I'm sure that there are kids who go down to the [stream], just frolicking or skipping stones or wading in or exploring, and they don't know the health of the [stream], and that's one of the problems, that people don't know what the health of the [stream] is."

Programmatic Challenges

Identifying activities

Identifying specific programs and growing as a watershed group can be challenging, especially without a plan of some kind. There is so much work to be done, that it can be difficult to narrow it down.

"Like growing in terms of our role and activities. When started we just... did citizen science... It's time to have a bigger story, and I'm not sure how to do that."

"I can barely get the [project] done, given everybody's busy schedules and different ideas. You've got to allow all those ideas to then narrow it down."

Streamlined protocols would make it easier for watershed groups to get projects done. Examples include Trees for Tribes and Water Assessments by Volunteer Evaluators (WAVE). More complex projects require a higher level of organization. Focus group participant:

“...always gravitate towards that which is organizing light. It's very easy to get just way too complicated projects, and I think like the WAVE program really started to become simple because of that standardized protocol. The Trees for Tribes program. Seems comparatively easy, you know what I mean? It's simple, actually, you know, trees in a bag or whatever that that program seems to. Even those are lifts for people do, but at least they kind of already thought through it. When you start to do something more complicated, it just you need a really great community organizer, you know you want to draw in a lot of skill sets, it just gets a little overwhelming, so organizing light standardized protocol just is very helpful for getting people doing things.”

Program logistics that are challenging also include securing access, renting equipment, obtaining funding, and getting the word out.

“I would like to see – we are doing events. I would like to see more people come to them.”

Water Quality & Environmental Data

Lack of existing information

Several watershed groups are concerned about a lack of existing or up-to-date water quality monitoring data. This is a barrier to planning actions.

“So to me, the important things are concern about the turbidity, what that means, concern about the water quality for the aquifer and the wellheads, for the municipal supply..., flooding, and encouraging – what's the water quality, we don't have water quality testing.”

“And you really don't want to have an impaired waterbody for any reason. You worry. And water testing is hard too because if you don't test for certain elements, then you don't know that something bad is in it. And it might be.”

“We've talked about water quality testing, but some of the macroinvertebrate testing. I've tried to get that going a couple of times, and we've needed assistance with that, because I think that that could tell us a lot about the health of our watershed over time, but that take somebody to kind of administer and keep that going on an annual basis, too. That's been a big hole in our data. We have older data that was collected about that, but now we need to kind of update that and keep track of it.”

“We don't have anybody that's really like pushing water quality testing. A lot of the other [watershed groups], they do a lot more in the way of testing. It would be, I would love to find some money to resurrect... stream biomonitoring, go back to sites we haven't been to in the better part of the decade, and see if things have changed. I'd really like to get on the [tributary] and see if there's impact from all that sediment, or did it all wash downstream. I'd love to do, see some sort of a study in that. But unless I take the lead, probably it won't happen. That would be another project for us.”

Existing water quality monitoring programs like WAVE are not very precise, and more detailed water quality data are needed.

“We have some people who are pretty good at macroinvertebrates. But they don't have scientific degrees, so we use the WAVE program for some stuff... But the WAVE program isn't very exacting in the middle. It'll tell you if you have a horrible situation, it'll tell you if you have an almost pristine situation, but the area in the middle is a little vague.”

Watershed groups also need access to existing water quality and environmental data, which may be housed within different agencies or municipal departments.

“So that's also another real difficulty that I'm finding, it's just like being able to get the data. So almost all the data I have now, I have a lot of great data for the section of the [watershed] that is in [one] County. But the sections [in two other counties], I don't really have. I mean, I'm sure I could easily get it, but what I've got, you know, it's that time and capacity thing.”

“...that's one of the problems, that people don't know what the health of the [stream] is. Whether or not it's safe to be dipping their hands into it. One of the things is, of the Health Department, rumors that I've heard, they've known since the 90s I guess, or maybe even before, that the [stream] is not healthy. And yet they don't put out any kind of information on that, or maybe just within their sphere of influence. Maybe within house they do, but the people don't know, and that's one of the problems... That's a concern, because I've heard of people who have gotten sick and the doctors can't figure out what it is, and this one person lived on the [stream] most of her life. So you can't make that connection, you can't say definitely that it's a concern or it's endemic to the [stream], but it's unknown.”

A focus group participant also spoke to this challenge, and gave the example of groundwater monitoring data.

“The lack of data available and ability to get data... with all the information that is out there, there's an awful lot that's not out there. Even if you – no one knows how to access what is there.”

Putting data to use

Watershed groups want to collect data that can be used for action by NYS DEC, municipalities, and others. They may lack a clear understanding of how to collect, compile, and communicate that data so that it can be as useful as possible. Managing data can also be a challenge.

“In my mind, basically the reason for sampling is to track the quality of the water in the stream. And once you have that information, then that next step forward is, did you put it together right so that someone else can use it? Being the DEC or other municipality furtherwise, to understand that there might be an issue there.”

“... one of the first things that we did in the [watershed] was gathered up all of the available data... Because one of the things that we had been talking about is that there were lots of different people that had done work in that watershed, but all of those data reports were in different locations. One of the first things that we wanted to do was compile all of those, with the idea that then you could develop a management plan from that... I think I shared it with a few of the folks that I know from the [municipality] that I knew were working in the [watershed]. But I don't think it – I don't know if they used it.”

“So that was another key point, was the sharing of information and of stories. Just making sure that people are aware that we have this data. We have shared it with certain people, but maybe not the right people yet, or not everybody that should be aware that it is happening. So that, I think, goes back to what do we do with all of the data we have. How do we package it in a way that is useful, and adds to the progress of our group?”

“And then in the meantime, just packaging the data more easily, I guess. Because that's something that I have been struggling with, we have all this data, but what do we do with it? So that's where [Hudson River Watershed Alliance] was really helpful, in showing what other watershed groups were doing, and connecting me also with also other watershed groups that have a more government presence in there... I guess the first step, which Emily has already helped with, was what to do with all of our data and how to move it forward into being something that is actually helpful for the watershed. So, Emily helped us with the watershed assessment. She explained that that could be anything, it doesn't have to be this crazy huge document. It can kind of be whatever we want it to be, so that's very nice and really helpful for us.”

A focus group participant also noted that community members may not be aware of water quality data, and there may be a gap in communication or education there.

“One thing I've been thinking about recently is the fact that there are members of our leadership team involved in our sampling program but there is, and this is probably my own fault, but there is a gap between what the water quality data information and the knowledge of the community.”

Watershed groups are also concerned about the quality of their data, and may need training on methods. They are concerned that citizen science isn't taken seriously, or that people are trained enough to collect good information. They also need assistance from scientists and researchers to interpret and communicate findings.

“Maybe the training is, and this goes back to the data collection, the citizen science issues... If we're gonna be allowed to check water quality, is what we find going to be acceptable? It may be that just because one or two of us dealt in science as a career. That's just a coincidence. So we know about a DO test or phosphorus or nitrogen, kind of stuff. You know about that stuff. But if you're just a regular person coming in from a different kind of career, and you didn't have that experience and get trained on how to collect it, will it be accepted? Will that information be

accepted? That would be technical training that would be helpful. The recording of information and knowing where to send it once it's been collected and then interpret it. That's maybe for those scientists and researchers."

Funding and support for water quality monitoring

NYS DEC's water quality monitoring requirements are a barrier to receive funding for monitoring. This was discussed at length in the academic focus group, with several different people sharing their perspectives. These requirements limit partnerships between watershed groups and with academic institutions and prevent them from doing their own water quality monitoring. Technology is moving much faster than policies, and this is a barrier for innovative science. Watershed groups need reassurance from academics that their data are valuable.

"I think all of the recent requirements coming down from the state about needing QAPPs and ELAP certifications, has really limited watershed groups, their ability to work with or ability to do this kind of work themselves, but also partner with academic institutions to collect water quality data, and I'm sure air quality data as well. I think having more resources to help watershed groups build capacity and build partnerships and collect the kind of data that they need, I think having those opportunities in those resources would help them be more successful... I am more familiar with resources to collect specifically water quality data but all sorts of data – drinking water quality data, ecological water quality data. It used to be that a watershed group could very, fairly easily, partner with an academic institution and write an Estuary Program grant to do that sort of monitoring work, but with the recent kind of enforcement of the ELAP and QAPP requirements has limited those collaborations and those opportunities... I understand the need for those at the state level, but I mean, if we're talking about working with watershed groups, they just want to know kind of baseline, what the fecal indicator bacteria concentrations are, they just want to you know... just kind of basic, is it safe to swim and fish in these streams, in these watersheds. And it's really, it's harder to do that. I know it's not impossible, but for me personally, it's been harder to do, to answer those kind of questions."

"I think that also is going to become even more problematic as we have remote data acquisition and we have sensor technology really moving forward really quickly, and you're going to run up against the ability to actually monitor in real time for a reasonable amount of money, streams and tributaries and rivers with the 'oh this isn't ELAP certified,' right. And that is tragic, because... you put academics together [in the focus group], we all understand the difference between noise signal and data quality and the amount of data you get, if you're getting a lot, if you calibrate your remote acquisitions well, you then have a stream of data that is so good because it's so frequent and intense that you can actually get a really good signal out of that noise, even if it's messy data. But that doesn't really align with these kinds of regulatory certifications, and really, I find myself in a funny position because as somebody who is really, really in favor of regulatory processes, I see this one as potentially... it's the difference between wanting to know whether it's safe to swim and certifying a town to draw drinking water, and those are really two very different things."

“We've established a pretty great core facility... and we refused, any minute that we're required to do those sorts of ridiculous time-wasting avoidances of DEC doing its job, we're devoting to communities and providing what they need and PS doing peer-reviewed published research. So in the meantime, while the state gets its act together, I completely agree and I think that communities actually need more of us reassuring them that they do not need the DEC to do the stewardship that they want and that when it comes to the DEC, that's when you can try to jump through their hoops. But they are hoops. And we just need to be very clear about that, particularly from the scientific community. We are publishing research that is using the approaches that we have, and would not be acceptable to the DEC, which makes me question what kind of science the DEC uses at all.”

Watershed groups need support to help them monitor water quality, including funding to hire staff and access to equipment. One interview participant described the challenge of maintaining equipment for long-term monitoring studies in streams, where data loggers can get washed away or need replacing. Monitoring protocols, guidance on strategies and when to change the approach, and assistance with partnerships would also be valuable.

“One thing I think would be really helpful is a monitoring station that you could take into different locations. And it would have some basic capabilities of water quality, turbidity, whatever – a set of parameters. And in an ideal world, that could be taken to particular areas and moved around the town, and maybe it would even be not just a static but an ongoing thing that you could link into a website and monitor this location for a month and this for a month, and get the data in real time.”

“One of the people has said, ‘Well, should we even be talking about finding out where the point sources or the possible sources for enterococcus. Should we even be working with [a regional organization]?’ And I’m saying, holding back on nine years, and this is the premise that we’re a group because we started with [that organization], and we’re not certainly going to give that up. We are going to modify the monitoring. I don't see now why we need to do it six times during the good months and 16 sites if we are also going to be doing [other types of monitoring]. We’re asking for nutrient testing. We do phosphates and nitrates. We need to kind of scale it down a little bit, because I've been doing it for nine years. I'm getting tired of doing it. Not that I won't do it, specifically maybe 6 sites instead of 16 sites. Every month on a Saturday morning, you know, I think I could be doing other things. I'd like to start directing my energy towards getting creek-side commercial establishments to start pitching in on a yearly basis to give our organization money so that we can do other things, so we can promote more. And also starting to push the town in that direction. Monitoring for me is well, been there, done that. Okay. Let's move on. Not that we shouldn't give it up all together, but I'd like to fine tune it.”

Implementation projects and stewardship

Implementation projects are very challenging, and may be beyond the capacity for many volunteer watershed groups.

“...if you want to get yourself in trouble, go do projects. If you want to stay out of trouble, just go preach to people. Somebody's going to get mad when you do something, somebody's going to say that you caused a problem as soon as you touch it, and somebody's going to come back and say, oh now the parking lot's flooded because of what you did. So, you have to have a little bit of... a tough, [thick skin]. I don't know if that's really me, but I recognize that it's a lot easier to preach it than do it... There's always liability, right? ... Yeah, if you have a project that really blows up in your face then it, you know, that's the kind of like, it's not a problem until it is.”

Some watershed groups assist with maintenance of parks and public spaces, and some manage land. Specific challenges include invasive species, deer, heat, and floods.

“It's a pretty good [survival] rate, it went through so much in the very beginning. There was extreme heat for a couple of weeks, so we had to go in with buckets and water them, and then it was intense rain, and it flooded like 3 feet high, and everything was just completely submerged. The invasive, it's Japanese Knotweed, they just are so aggressive and persistent. So they kept coming back, and we had to keep fighting them. And deer were eating all of the shrubs so, a lot of issues... just the fact that we have the stewardship groups throughout the watershed doing vine cutting, and sometimes it feels like you're wasting your energy.”

“Staying with the restoration stuff but zooming in a little bit, the invasive problem, it's a real problem. It is a real challenge that no one seems to really have the efficient tools to solve. People constantly throwing goats and then the herbicides. But yeah, it is severely impacting the floodplain, and we don't really know how to fight it efficiently.”

Implementation projects take a lot of time, effort, and funding, and may not be around for a very long time. This includes both agricultural and urban implementation projects, which may be intentionally decommissioned or unknowingly altered or destroyed.

“...we used to have a lot of dairy farms. We don't now, but the biggest investment I've made in my career has been in doing runoff control projects on dairy farms, and most of them are out of commission now, so that's a little frustrating. And it's one of the reasons why I feel a lot better about the floodplain riparian corridor work that we're doing, because I'm pretty sure that's going to be there for a while.”

“Interestingly enough, what's been a bigger issue is unknowledgeable people taking the [green infrastructure] practices out of service. I've had at least three rain gardens where we retrofitted around the catch basin, where somebody's come along later and said, oh look, there's a gully around the catch basin, let's fill that in with asphalt. And everyone's had the experience of the plants getting weed wacked and that's unfortunate, but the practice will still work even if some of the original target plants aren't there anymore. But when water can't get in the practices, then...”

There also may be unintended consequences of implementing projects. Site-scale projects like green infrastructure may be impacting the community more broadly and intensifying gentrification. It can be challenging to balance this. Focus group participant:

"...[W]e've been thinking more about how we incorporate social equity into our work, and now we realize the issue of green gentrification, where you're trying to improve the environment and that's leading to green gentrification and seeing eviction rates rising in the Hudson Valley. And I think that it's something that is good to consider more holistically about solutions and I have been hearing the term just green enough and then balancing that with other community priorities."

Resources and content needed

Information-sharing and trainings

Watershed groups need to stay updated on the latest science, programs, and case studies for their work. This was highlighted as a need from Hudson River Watershed Alliance, in particular. They need information that is accessible, relevant, and action-oriented. They also need regular updates on case studies, to better understand how these projects worked once they were underway and any lessons learned. Examples include Harmful Algal Bloom treatments, the status of PFAS in Washington Lake, the Village of Wappingers Falls constructed wetland, and watershed education programs in Troy. This interview participant also described the need for a group to facilitate discussions of technical information with municipalities. Partners that provide technical information like maps and data may not have the skills for convening and facilitating, but this could be a role for Hudson River Watershed Alliance to play, in partnership with other organizations.

"...the thing that the [Hudson River] Watershed Alliance does for us most is information. And you need to keep that up because I think it's dribbling away, right now... the big conference, waste of time. Chazen's meetings. He brings speakers in, he brought, the most valuable thing in the last couple of years is the HABs problem. He brought in the people from New York State DEC to talk about the problem in layman's terms, to explain the problem in layman's terms... That was fantastic. Some of the other things that have been out of those meetings? Fantastic. They get us a start on things. We actually had the lady from the DEC that spoke at that meeting, we invited her... to speak at a meeting for us... [T]he value of her piece was, I know she was a scientist, we know she's a PhD, but she was able to put together a PowerPoint presentation that everybody in the audience could understand, and that's the key. We need the information on what's going on, now. At the time, it's still a new science. There's not a lot on it. There's not a lot published on it. So the question is, so what do you do? We have a problem, we've defined it, we know what we've got, etc. So, what's the solution? ...They were trying a couple of different things, none of which were working the first year. But we wondered, was the second year more successful? I haven't got that information yet... We need you all to cut through that stuff... We really need to know what works and what didn't work, and why. And how much it cost... Because I can't help our citizens have cleaner water and solve problems dealing with water

unless I can give them information on things they should try, that don't cost \$6 billion. It's a matter of bringing that education and information out of your academics, out of your DEC studies hidden in the corner, and two people. That's what you have done the best job of, and need to continue to do. For all of the watersheds... But the information is important, and it has to come out regularly. For a while they were doing some of it in your monthly bulletin... and the good thing that still comes out in the monthly bulletin is a reminder of the grants that are coming up, which we can't apply for, but. But you really need to concentrate on these subjects and get it out to the whole watershed. If you came out to the meeting in New Paltz, you got it. But what if you couldn't come, some morning meetings, you know, people work. What's the latest on this? How do you look up some of the DEC website for stuff that's pretty hard to find? Unless you can spend hours and hours searching one aspect or another to find it. The information is important, because without that, people up and down the Hudson can't do things... You all know where the information is. You just need to find a way to transmit it to us."

Focus group participants also spoke to the need for regular education opportunities to share new and updated information and to bring new people up to speed. New terminology and jargon can be a barrier for grants and watershed projects.

"...there is also the need to just put those trainings on a regular, recirculating basis because people say, 'I went to that land use training,' and you know what, they went to that land use training 15 years ago, and it's time for a new one. There's always the next thing that you're working on and you forget that it was a while ago and a lot of things have changed. I think in part it's the new stuff, and in part just recirculating some of the old workshops and old styles of doing things because... they were very successful. We just need to do them again or more often."

"Even with funding... I'm coming at this like, I don't have a background in policy and knowing all this stuff. I'm not a big grant writer, and so getting started... just learning like, what is a 9 element plan? What are these- there's so much to do with watersheds and all of this work that's really kind of technical, and it's like a new language... But that definitely is a barrier because it took time. I mean, I'm like over a year into it, and I'm still figuring out all of the ins and outs..."

"One of the major challenges that many of the people you often- most of the people around the table and some of these groups have is they don't know much, they don't know much about local government or the law, or the science and how do you address that you know that's a big big challenge but again, maybe some kind of training materials and ways of encouraging people to learn some of that would be- maybe there's some new ways to do some things on that."

Small municipalities that lack capacity also need technical assistance for projects. Focus group participant:

"So I think one of the issues we should look at is looking at technical assistance. There used to be a group near me... and years ago, they had a circuit writer problem and they would come into the small communities and bring a professional, they were grant-funded, and they would send a

circuit writer into the community to address specific issues as a technical assistant provider, and I think we may want to look at that. I know Rural Water does that, but he's one guy, and he does a great job, but perhaps we should look at how we are going to assist watershed groups in being more viable into the future."

Watershed group volunteers need more targeted and specific training to bring them to a higher level of understanding. An interview participant mentioned a variety of audiences, including highway departments, wastewater and drinking water operators, municipal elected officials, and consulting engineers for municipalities. This person felt that in-depth, specific trainings were more helpful than "nice and polite" watershed roundtables.

"I would love it if the [Hudson River] Watershed Alliance in conjunction with DEC did trainings, technical in-depth trainings, and maybe even partner with DEP and do trainings outside of the watershed in our county. Or do trainings in East of the Hudson in Westchester, you know, just taking the knowledge that exists in the Hudson River Valley in the Hudson River watershed and making it more understood by a broader sector..."

"It's almost like having a separate educational program for volunteer people just to attend classes at that level, at a pretty high level. But you're not being graded. You can go out into the field and examine whatever these issues are and show them good examples... I would go on that kind of stuff. Even just the geology issues, the soil issues. It's like going to adult ed classes, just for the fun of it. You know, learning how to cook or something."

Specific topics

Watershed groups expressed the need to focus on climate change, in understanding connections with state climate policies and greenhouse gas reduction and developing strategies to improve climate resilience. This includes flooding, impacts on water infrastructure, and water quality.

"And there's grant money out there, there's a need out there, there's state programs out there, the state wrote this amazing new climate action, climate act. Water was barely even mentioned, because no one understands the role of water intersecting with greenhouse gases."

"So, climate change. I don't want to eliminate that because it's now, I like to use the term, it's no longer climate change, it's climate crisis. We're now beyond the scientific data. We're beyond the facts that the data is all there. It's all plain out. The science is given. Let's get beyond the science and move to activism and let's get something done."

"I think we need to address the wastewater issue, CSOs. I think we need to really do a better job in making sure that the drinking water plants, that are the right on the river - with exception of the [one municipality's] water treatment facility, because it's state of the art - are low-lying. I think that with climate change, it's hard to know how that's going to impact the quality of the river, the water. So short term goals, I think they're huge though, I think it's wastewater, CSOs,

drinking water plants... starting the process of getting the awareness of the public of where they're drinking water, so that the public can play role in helping [the watershed group] to succeed. We need public support to move some of these mountains."

Watershed groups are also interested in stormwater programs and MS4 education.

"...[P]roviding some of the technical information for homeowners and businesses on stormwater and other things that they can really do. And that there's a gap in [the county] to provide that information."

"... MS4 could be implemented in a different way, so that it's teaching highway departments, while helping them fill out the forms. Because at the moment they hire somebody to fill out the forms. It's just homework. It's not an opportunity... So if working on MS4 is a way to show elected leaders and department heads working on this, learning about it will help you get more funding, help you be more effective at not having EPA rule against you, that's the best scenario."

"Some of those issues, things that needs to be done, things that should be done, on a regular basis. I would love to do a lot more education of our local planning board people... On the value of rain gardens, and green infrastructure. Because we're hitting another planning stage, everybody's walking in with these development projects. They don't even do an erosion control plan, so that's important. Funding is important to us, it's a big weakness."

Watershed groups also need support and information on the legislative process, along with understanding regulations and policy.

"There's no one among us who's a legislative expert, who knows what exists, what doesn't exist. If you're trying to change this or pass that, start from here, don't go from there. That is where we're really, right now. that's an educational gap for us that we're very interested in filling and understanding that a lot better."

"And then I think that the continued support of organizations around us, we really, really need a lot of support right now, in understanding how to deal with the legislative process."

"...understanding regulations so that you can help modify them or change them or enforce them."

Watershed groups are interested in resources to improve working with municipalities, including explaining the value of tributaries.

"How to interact well with municipalities would be at another point."

"But I could see a lot of value to having board members of the [Hudson River Watershed] Alliance speak to village and town boards in general about your missions and about the

importance of tributaries, because they don't know. These environmental questions, the big climate change environmental questions they're obviously aware of, but the small-scale tributary kind of issues, they don't have a clue. This is something that we've thought about doing more of ourselves... going to lots of municipalities and giving a pitch on the importance of tributaries and blah blah blah, but that's something that I could see the Alliance doing very effectively, independently."

Watershed groups are also seeking a better understanding of stream functioning and potential restoration opportunities.

"A better knowledge of stream functioning is something I benefited from... It's possible that the [watershed groups] would help their communities out by making some of that knowledge more commonly understood, about straightening and not straightening."

"I think a lot of the streams within [this county] are hardened. I would love to see more softening, but I'm not an engineer, so I don't know. But it would be really great, I think, for the watershed group to be a resource for education on more natural stream bed restoration options and tapping into resources that we have through the Landscape Association and others that we could use that. And it would be great to have a case study within [the county] on what a soft shoreline was able to offer versus a hardened shoreline."

Other specific topics include connecting stream work with lakes, a strategy on fish and invasive species, and assistance with empowering education programs.

"We haven't yet learned how to do lakes and ponds well. You can do the streams, but there's [lakes within the watershed]. How to use that, and what are we electing for."

"I think the other thing that's happening is a much greater appreciation for fish, and fish coming in and fish going out. And so it's huge enough that we got a crack here, is invasive species and Asian carp. If you had to put a group together in the [watershed] and say, okay what do you really need to worry about for the next decade? I would say, we've got only one thing to worry about and it's keeping those damn carp out of here. And I don't care what it takes and it's to keep those fish out of here. I don't think we're at that point though."

"My strong feeling, my intuition, is that with the [Hudson River] Watershed Alliance, our biggest need is education. Helping to educate the community... to make 'watershed' something that is real and accessible and exciting. For people who are not coming at it from a professional or strongly activist... Your average person! Knows not just what a watershed is, but what their watershed is. And starts to feel engaged and involved in it. That's where, I feel like, there's a lot of space for support and development, is that part of things. Because really, what we've seen already, is that the more people in the community that feel like they are informed, or that they're not coming in not understanding anything. They have some understanding, which is so much more successful at these public meetings. We come across as a much stronger community, and a strong community is a community that needs to be paid attention to and

taken care of. You know, the educational aspect is a big part of that, it empowers people. It gives them agency.”

Collaboration & Partnerships

With limited capacity within the groups, partnerships are critical for watershed groups to meet their goals. Partnerships may be collaborations, working directly with organizations, agencies, academic institutions, and municipalities. There is a difference between having access to this capacity and expertise through group membership and group partnership, but it is a fine line and one that needs to be better defined. Networks also contribute to partnerships, though less directly.

Networks

Learning from other watershed groups

Networking with other watershed groups and partners helps people stay updated on who is doing what and opportunities to partner. It can also help watershed groups learn from each other's experiences and expertise. This can be especially valuable when a new group is getting started. When watershed groups can learn from or collaborate with other groups, it helps make the most of limited time and resources. Networks provide access to information, resources, and potential partners. Two focus group participants that are members of watershed groups:

“We actually just reached out to a lot of different watershed groups and spoke to them and had conversations and asked them questions to learn from their experience... what have they found to be successful, what have they found to be not successful? What are some of the things that you've done that you know you wish you'd known at the beginning? And that's been really, really helpful. So again, we haven't necessarily worked together in partnership, but we've kind of developed relationships enough that we can ask them questions and get advice from them on certain things.”

“I would also say not reinventing the wheel, actually looking for where it's already being done and building off that or trying to collaborate with someone. I think a lot of times, I see in our group us trying to reinvent something that already exists and I have to fight to be like, why put the energy into restarting this when you could just work with the group that's already doing it and they've already done it successfully, so why not work with them?”

Having a community of watershed groups working together can help overcome barriers faced by individual groups. Focus group participant:

“They're all working individually, but that they're working together, they all have a common theme and they're working on the same things and reaching out. And it's created this network of people that can say hey, I'm working on doing some water sampling here, yeah, we found

that same problem here, this is how we addressed it. And I think helping make those connections is really what makes strong collaboration. So even though there are small watershed groups, they realize that they're not working alone."

Watershed groups are interested in sharing their expertise and lessons learned to help others. They need more opportunities and structure to allow this exchange of information. Examples of specific topics that groups are interested in discussing include invasive species management, group organization, and problem-solving.

"I worked a little bit with [another watershed group] that tried to get started, and kind of went for a while and petered out. And I went to some of those meetings and then I just didn't have time, but I'm really interested in how to help a group like that start. Because I think there are certain things that definitely help a group get started, and there's certain reasons why they fall apart right at the beginning like that. And it's not because any one person does something wrong, it's just being aware of some things that work better and some things that don't seem to work as well. And I wish that I had more time to reach out to groups that were trying to get started or thinking about getting started and really be able to put some time into helping them do that... Even who to go to for more information on certain things."

"Because what the [watershed] does may affect how other watersheds, that aren't even formed... are going to think about moving ahead... It'll be like a map on how somebody else might want to do it. Or maybe what mistakes we make, others will learn from, and what progress we make, others will learn from. But I want to go in that direction. I want to share this information and receive information from all other watersheds."

"I think that the idea exchange, which is something that you guys [Hudson River Watershed Alliance] are already doing and that happened in the conference, but I just saw it now – we're just sitting together around the table with the [another watershed group] and [another organization]. So maybe, more original forums. Maybe we could have a... County or Lower Hudson watershed idea exchange panel, or something like that."

"And I guess one barrier in that sense would just be improved education on what is going on in other watersheds. So as we step up with new leadership, they have opportunities to learn about what other groups are doing and fill in those knowledge gaps."

One interview participant spoke to the need for a program very similar to the Hudson River Watershed Alliance's Watershed Roundtables, but did not seem aware that this program already existed. The Watershed Roundtables may benefit from being improved or restructured to better meet this need.

"I thought it might be interesting to have chairs and past chairs of all of the watersheds that have formed groups to have their own meeting one time. It would be difficult to go up and down the river but maybe north and south, or more mid-Hudson or whatever. And see if they could talk about the individual problems they've had and how they've solved it. Now, you would think

that that is what you would want to do, and I'm sure you want to do that. But at a conference, there is no time to do that... But it would be people who are right at the ground level, at the watershed, who are talking about more localized problems. But those problems can be considered general. Somebody way up the river might have the same problem that we have, you know. Or how does an intermunicipal council work as opposed to a 501(c)(3)? I've tried to connect with people, and I've gone to a few other watershed meetings, but very minor. I've only ever done it once or twice. I can't spread myself... So if you talk about people you might want to reach out to – and you would have to limit it to chairs or past chairs because, if you tried to get everybody at the [watershed group] and then everybody in a different watershed, there would be too many people involved.”

Another interview participant felt that they got much more out of the Hudson River Watershed Alliance meetings that were small enough for people to really talk to and learn from each other.

“You need to keep up at least the meetings you're doing. I liked your big meetings, years ago, when you had more individual workshops. The general speaker's thing is sort of nice, I hate to say, for me it's a waste of time. I got a lot more out of the meetings where you went pretty much right into workshops, and they were small enough so you sit around and talk to people. People giving the workshops, and other people who were interested in the workshops. Because you all had the same problems and learning what other people were doing was really important.”

Partnerships with other watershed groups

Watershed groups are interested in collaborating with other watershed groups for larger projects. This could include advocacy, water quality monitoring, or other regional projects. There is an opportunity for the Hudson River Watershed Alliance to help watershed groups have a larger impact.

“I'm always interested in partnering with other watershed groups to get big things done. And because I'm naturally predisposed to advocacy, I'd really like to see more water resource protection. Advocacy going on a bigger scale. For example, when New York State considers redoing their wetland and stream protection legislation, I think we should all play a major role in making our concerns known to the state. If it doesn't come from us, from watershed groups, who is it going to come from? And I think that's something that we all can have a much bigger role to play. I'd like to say, and even expanding it to the national level, but for now, I think that even state and regional stuff would be great. Even on watershed scales, it's hard to coalesce in a smaller geographical area, because watersheds don't follow municipal boundaries. And to include a whole watershed, you have to think a little bigger. And that's why I think that that inter-watershed stuff is so important. And that's why I have big hopes for the Hudson River Watershed Alliance, because I think that's the level, that's the scale where we need to be able to come together and not only get information and share information, but make our voices heard, be heard, in a much bigger way. I think we could have a huge voice in New York State if we

pursued that. And again, I emphasize the informed advocacy, and we have plenty of good science to back us up."

"The one thing that I guess I would love to see more of... [would be to] try to engage the member organizations in a joint project. To work together to define it, but then to have everyone work toward-- besides the goals that they were already pursuing independently-- one thing that we would all work on together that would bring a unique strength to a project."

Having a coordinated communications and action campaign could also help watershed groups overcome barriers and have an impact. Two focus group participants in conversation:

"Would there be any value in having like, a year of campaign, like OK, it's the year of the spotted salamander, you know? So everybody focuses... brings attention to that tool and that project for a year. And then a year of phosphorus, I don't know, whatever brings attention to different things, and sort of the tools that go along with them... It may be too one size fits all for such a big, diverse watershed, but I think it might be fun to play around with."

"I just have to say I love the idea, [name], because what a unifying way to bring watersheds on to the same page and thinking about, you know, and also what a great way to have a measurable, I mean not to be a bureaucrat, but like a measurable target... I'm so excited, I want to just do that right now. I love that idea. Let's do it."

At a smaller scale, there may be opportunities to partner with nearby watershed groups on programs, or with watershed groups that are working on similar issues. Collaboration can be a challenge and is related to capacity.

"I think the [other watershed] is one challenge to it. Well, they're connected. The [other watershed] flows into the [this watershed]. I think that there's not... I don't know if any of what ails the [other watershed] would impact [this watershed]. But I would imagine it would, to some degree. You would know better than I. But making those connections. I know that there's an interest from this group to partner with that group, but I don't think that there's the capacity to figure out how. How do you do it? Like, how do you support one another... I mean look at what happened in [a specific municipality]... The only reason there are citizens engaged there is because of the [other watershed group], which actually helped them to get organized. And I think we need more of that. That's why I like finding partnerships. Even if the [two watershed groups] just sponsor one event a year. Just to find some intersection, you know."

"We have industry, we have residential, we have parks to tap into as additional resources, so I guess I'd just be intrigued to also learn if there are other watersheds that are made up in the same kind of land use percentage, too. ...I would just be intrigued to see how those waterways that are more similar to us in land use work."

Some watershed groups have a wealth of expertise, and would be valuable partners. They also could bring training opportunities to other groups. Focus group participant:

“Looking at this expanded definition of watershed groups, I know there’s a dearth of technical resources that almost all watershed groups struggle with, but then at this expanded version, we have some watershed groups that are packed with technical expertise, and I need to figure out how to get that to other parts of the county. So there’s definitely some groups that are funded on soft money that dictates that they have to stay there, and working outside of that watershed is a violation... We are able to occasionally put some of our people in partnership with some of the folks who work in the NYC watershed to gain that understanding and be part of those training sessions whenever they can and wherever we can fund it to do so. Most of the people that are in there are like level 4 Rosgen stream training, which is an amazing resource to have in this area, so whenever we can get people in the county or anyone around who can partner with them and share that work build fast.”

A barrier to collaboration may be competition between watershed groups. Organizations are competing for limited grant funds, and there may be a tendency to one-up each other, rather than working together. Clearly defining collaborative projects could help overcome this issue.

“I come from a corporate background, with a whole backstabbing, cutthroat kind of atmosphere. I’m seeing that happening more and more with the nonprofit groups. I am seeing a BS bunch of partnerships and collaborations, and it’s just so BS, I’m sorry but. Everybody out there is vying for these grants and these nonprofit groups are turning into corporations and spreadsheets of assets and liabilities, and I almost feel like I’m back in that corporate world again. It’s very different, and the grants are competitive, yes. But when we have our watershed alliance meetings [Watershed Roundtables], we go around the room and I’m having deja vu these days when I go to the meeting, like I’m back in the corporate board room again listening to what people are saying. Maybe as we age, we start thinking of things differently, but I just feel like it’s getting to be really big business, and I honestly do not feel there is any such thing as a nonprofit... Everybody’s making a buck. And because of that, I think the competition in watershed groups, I think it shouldn’t happen. We really should be partners and we should be collaborating more, helping each other, and not sitting in a room saying, “Well this is what we did with our \$2,000 that we just got.” It’s like, the rest of us poor folk are sitting there saying “Well, good for you guys.” It just doesn’t feel homey any more.”

Regional networking with potential partners

In addition to networking with other watershed groups, there is value to connecting with other partners for potential collaborations. While regional entities can help make connections, it can be challenging for them to stay up-to-date with resources available and what the various groups are working on. It’s also challenging for watershed groups to keep track of different agencies and potential partners. Three focus group participants:

“Connecting people. I know I’ve touched on that before but you know, I’m a great believer in let’s all share what we know. So if there’s a group whose or people were working on something and, you know, maybe they had questions I can say, well I know that this one may be able to help you, and then making those connections. And then, I think, guiding or recommending a

project. I have a group right now that came forward. They're not really affiliated with any specific watershed, but it was like we want to do something, give us a task, give us a project, and so trying to find that."

"And so, one of the needs that I'm just thinking, again, selfishly as an organization trying to stay on top of what other organizations and nonprofits and partners and collaborators are able to provide the audience is that we're working with is a really hard undertaking right now. I don't know about all of you, but I get like 5,000 emails like I can't- I don't even want to see how many emails I've gotten during this two hour call that I have to respond to. And there's so many really great organizations who are doing really great work that benefit watershed groups, and some of the other audiences that we're working with, I mean, I've learned so much and just am just reminded so much in just being on this call with everybody that, oh yeah, Riverkeeper provides that support, Scenic Hudson provides that support, large groups provide that support, and so just kind of staying on top of that would be a huge help so that I can then be a better resource to the groups that I'm working with."

"I would say that one of the biggest things that we always find from an agency perspective is how to work with those watershed groups and how to develop those relationships, because they don't remember/understand who all of the different partners are and all of the different roles, and you start educating them and working with them. The agencies folks are more longer standing, and I know who a lot of these committee people are and politicians are trying to re-evaluate and repurpose from where the watershed group and where the watershed group is. And where we sit, this stuff takes time and everybody wants it done yesterday, and it just doesn't happen."

An interview participant also expressed the challenge of keeping track of and navigating the variety of resources that are available from state agencies.

"Now there are so many different state initiatives, there's so many different state mappers, there's so many different funding sources, and for any local officials to try to navigate it is super complicated. And so one of the recommendations is to create some interfaces and some tools that kind of bring that stuff together and provide better guidance."

Watershed groups are also interested in a better understanding of what academic partners are working on, to identify win-win partnerships. Several interview participants cited this kind of information-sharing as a role for the Hudson River Watershed Alliance.

"If somehow the [Hudson River Watershed] Alliance could help pull together methodology more than anything else, to know what is where and what professors are interested in doing that, because that could be a pain. I could really see that being a time-consuming irritation for professors who are, as you know, super busy. If something like that could be worked out with any professors who are really interested in making that happen, that would be terrific... [G]enerally you want arrangements to be win-win situations. And I'm sure there are a number of situations where certain professors would be interested in having the human resources to do

a project that they were interested in, that there was mutual interest in, that kind of thing. I would think that could work somehow, so that would be great.”

One interview participant shared that regional networks are critical to the watershed group existing.

“And actually, that's been a theme throughout the five years, is that we are very much a coalition in a network. Even though we're our own discrete organization, we don't exist apart from our connections to the other - we don't exist really, apart from our connection to... County Planning, or to residents, particularly [in one municipality], or to [a regional organization], or to Hudson River Watershed Alliance.”

Need capacity to build partnerships

Building trust takes time

Although there is interest in building partnerships, time and capacity are barriers. Having dedicated staff to help coordinate would help build this capacity, but funding is needed to support staff. Relationships take time and trust to build. Focus group participants:

“If you think about the time, every partnership and any relationship just takes time and persistent exposure to each other. If you have three meetings together, you start to know each other. After six, you really know each other, and that's just time for meetings, I think that becomes really important so that's a piece of that.”

“For me personally, it's not a lack of motivation and desire to build partnerships, I really think it's just time, capacity... [I]f I had like a dedicated student or staff person, because... yes, a student could help me build partnerships, but then every fall, we're kind of starting over from square one and it's 3, 6 months to get them up to speed. So I really do... feel like I would love to have an equivalent of Emily, but helping to kind of build the academic arm or the research arm of this kind of larger thing that we're talking about. I just feel like as an academic, I'm pulled in 100 different directions, and at the end of the day, reaching out and making those real, meaningful, personal connections with watershed folks – yeah, I can do it in July, when I don't have 18 million other things going on, but then of course, the problem is, I make this really good connection in July, and then when it's midterms and I have the students needing my attention it just, that kind of stuff slips through the cracks. And then you kind of lose, you've taken 3 steps back, because you've built this relationship with a community partner and then you just like disappeared, or I mean, maybe that's my experience. So I think, it's not necessarily the money, but it is that kind of dedicated staff person that can help, that can help us build those connections. So an alternative model is, I've been working with, the AGU has this kind of community science program where they partner community scientists with community groups, and they have someone whose sole job is to kind of schedule the meetings and keep us on track

and make sure everybody is doing their homework. And I think it's not perfect, but it definitely, it definitely helps."

"I want to reiterate, I think that is one of the biggest collaboration needs, is just having the time, especially at academic institutions to have that capacity, it's not really about the drive, it's just you're being pulled in so many directions and time can be allocated if funding is there and those things go back and forth."

Limited capacity at partner organizations can also be a barrier. They may not be in a position to take on more work and actively engage. This could also relate to a communication challenge, and reframing the conversation so it relates more directly to partner priorities.

"I would love to have more partners at the table, and getting those partners to not only be at the table, but be active partners. We have seen issues with that with other projects that I do outside of the [watershed group], too. Everybody is overly burdened with work, and they are understaffed and have budget cuts for everything... I guess in a way, an obstacle that we are having is how do we really just display it in a way for people to care and organizations that are already overwhelmed with work to care and that this is not really on their top 20 to do list, to participate in. I don't know if there are different story sharing techniques or work that is-- different forms of communication that have worked for other people in other watershed groups, but I would love to hear how maybe others were able to get those that were typically wouldn't be at the table, at the table."

Turnover within watershed groups can be a barrier to building relationships and partnerships. This can also be a barrier to access funding. Two focus group participants:

"I think a barrier is... reliability. There's turnover, there are programs and watershed groups that come in and out of space and time, and it takes time to build trust in relationships with people. And so oftentimes, I build a relationship and then the person leaves, and there's no one there behind the person to back the person up, so there's no -- there's like a lost history. And I can't tell you how many times, I've been asked... can you create a list of projects to implement on such things as: flood mitigation, stimulus money, source water, whatever. If I need to call up someone and say, can you give me a list of projects you can deliver in your watershed for \$1,000,000.00 and I could rely on that, it would be super helpful. But it's just too revolving, I think, and it's a matter of funding and people leaving and just all sorts of things."

"...[W]ith regards to the leadership of the organizations or the continuity or sustainability of the organization, not just the one passionate landowner or municipal official or whomever is beating the bushes and is leading the charge today -- And you know, that longevity is important for us to support them and for them to support us. Cause ironically, in my world from the stormwater side, we have successful access to funding, whether it be through the state or through the region or even working with other organizations like CCEs and regional council. We have been successful over the years, but the problem is that it just takes time in order to develop those projects and those relationships, and I think that it's one of those things that makes it

tricky when you're trying to manage the goal as well as where that role of where the different leadership sits and recognizing that there are a lot of local resources and how to access them."

Need clear goals and roles

A lack of clarity on mission and goals is a barrier for watershed groups to improve collaboration. With limited capacity, these can be challenging to define. Watershed groups need to be strategic and specific in their asks to certain people and groups to build partnerships.

"That's why I like finding partnerships. Even if the [one watershed group] and [another watershed group] just sponsor one event a year. Just to find some intersection, you know. But that requires enormous clarity already in what your goals are for the year. How do you strategize. I mean, I can tell you that at my job it is so ridiculous, because everything keeps coming and piling on. And before long, your workplan is out the window. So it's challenging to figure out how to do that."

"And you know, you are burning energy to do this. And you can only ask people to do, people will only do so much."

Watershed groups need to clearly articulate roles for partners, including community members, municipalities, and students. Three focus group participants:

"When a watershed group plans a project, I think it would be amazing if they could also think about how they can get support from the community and actually build those roles into a project so that it can be implemented... If you know you will want to do something and get the community to buy into it, you need to also contact people and get them invested in it, as well, and I feel like I see a gap in that access to people... I think building in this idea of how to reach people and incorporate them in our projects would be the best way."

"I work at [an academic institution] and I'm always looking for ways to get [college] students involved in community events... And if there was a watershed group that could just be like, hey, we need 10 [college] students today to come out and plant some trees, like that would be so helpful to me, if I didn't have to also organize that event. Like if I could just plug those students into an event that's already been organized by a local watershed group. And I think that college students are a huge resource that are often, maybe aren't as utilized as much as they can be. But I think that's part of the reason, is because faculty and staff don't have time to manage them. They can get the students there, but they don't want to manage what the students are doing while they're there, necessarily."

"Similar thought... but for municipalities trying to do public education participation. It would be great to have a watershed group that you just say hey listen, we need a stream clean up here, can you get the people together this day... Those are hard things to organize well... but to have it ready to go would be nice, with the approval of the municipalities. Generally, if someone's into public speaking to just explain what a watershed is, you know? This is where you are, this is

what it is, this is what we know about the stream.... it would be great to have somebody who could be just the spokesperson of the concept.”

Watershed groups should also clearly define and communicate their own role. A focus group participant described the key to good collaborations as making yourself indispensable.

“Good collaborations, I think - again, to me it comes back to, like, the watershed groups have to get in the mix on something. They have to make themselves indispensable, for an issue of their choosing in their locality. So when somebody like an academic institution, who usually is coming in cold, a researcher comes in and probably messes up your whole communication strategy because they have no idea that you've been talking about this for two decades. But it should be clear no matter where you look, it should be clear that the watershed group is involved. Like they're at the table, and there's no way you could enter that topic without somehow checking with them or talking with them. And that's not something that just magically happens, I get it, but I think again, that comes down to the watershed group picking their battles in trying to do a few things where they're really integral to that issue, as opposed to kind of touching on some other things.”

Organizational structure

Organizational capacity and structure may also limit collaborations. An interview participant shared an example of a partnership with an all-volunteer group that was challenging, because they didn't have a system in place to accept money.

“I think we need to be careful not to step on the toes of [a volunteer conservation group] ... They're an all-volunteer group, and so that makes it interesting when we want to work with them, because there's been a couple of projects where we want to give them money to work with us and they have turned it down, because of their structure, that they can't accept the money... So it puts us in a bind because we want to walk the walk, we want to pay groups accordingly for the service that they provide. But if they aren't established enough, then they can't accept it and then they aren't able to do this kind of work with us because it requires more effort than they're able to provide, and so it ends up being a more difficult process than had anticipated.”

Aligning with partners' priorities

In developing partnerships, watershed groups will need to identify where priorities align. There may be interest in collaborating with businesses or other environmental groups, but it may not be clear if the concept is worth pursuing. Power dynamics may also come into play through partnerships; they should be mutually beneficial.

“I'm trying to get closer to [a municipality], because there were other environmental groups in [that municipality]... I don't know if they're really meeting anymore. They were just maybe a one-time issue crew, I'm not sure. But I've even thought about connecting with them, seeing if

they wanted to join us, but I haven't gotten there yet. No, I haven't reached out yet. We have a woman in our group who belongs to both and I've mentioned it to her but I haven't really gotten a clear response yet on whether or not she thought that would be a good idea."

"There's been a lot of talk about not dealing too much with [a corporation]. I feel differently. Our mission statement says that we are supposed to be partners. I can't recite the mission statement, it's not like the pledge of allegiance. I have trouble with that, too [laughter]. But I think we should reach out to government, I think that we should have a relationship. We have this relationship with [an electric and gas utility], and they're a utility. When we first started people said, "Well you don't want to deal with utilities, they will just use you for promotion. They'll say, 'Look what we did for the [stream].' I said, there's no problem with that for me. I don't see that as a problem. I want those people who are able to fund these projects for us, and if they use us that way, that is fine. I'm not selling electricity, I want the [stream] to be good and healthy. I think I will use any kind of partner that's willing to work with me, I am willing to work with them. But you know, I haven't put that idea out there."

A focus group participant encouraged watershed groups to create partnerships with other organizations or agencies that can provide resources, like staff time. Building watershed work into people's job descriptions can help get buy-in.

"Then you look at a group – I notice Bronx River Alliance... and they are a professional organization, it's essentially a quango. It's part of the New York City Parks Department, but not really. And so, they have resources that come from that governmental affiliation. And so, I think again to the extent that many of these groups draw on town staff and county staff for their membership, seeing if that can be complemented by actually making it part of their job, right? And getting them to be recognized for this work as part of what they do in their day job is another way to get powerful buying from the communities and the governments that they're working for."

It can be a challenge for a watershed group to maintain its identity when partnering on projects. There may be conflicts in ownership, communications, and recognition.

"We have a lot of partnerships, but what I find with partnerships is everybody still feels that they want to be the key person in that. I feel like, okay how do we keep our identity, and it's not even identity. I don't care about the identity, I care about the [watershed]."

There may be opportunities for watershed groups to develop less traditional partnerships by considering local priorities. To build effective community partnerships, watershed groups will need to show up and listen to other community concerns. There also may be other groups with shared interests, like sporting clubs. Three focus group participants:

"We are very active with the [CACs in the municipalities in the watershed], as well, are now vitally connected with what's happening with the... watershed community, but that's because we haven't limited ourselves in terms of what we're addressing. We are thinking more broadly

about water and watershed as an idea around neighborhood and of organizing people. The other thing that we started talking about is air and air quality and how that relates to water quality. And the interrelationships there have become a powerful way to expand the work that we're doing in ways that we think about it and the people who are interested. In that way, we've expanded into [a new municipality]. It's not around watershed, but we started with air, because that is what the community wanted to talk about and that is what the CAC was interested in... I think the interconnections that we all are very aware of that have major ecological implications also allow us to make connections with brand new groups of people who have a lot of energy and wisdom to share. So I think if watersheds were helped in that way to bridge that gap, we might not be facing all these shortages of people."

"One issue sometimes, with environmental groups or work, is that sometimes they can just work on their one issue and can be seen as having their agenda and are not interested in helping. And I'm not just saying that this is specific to watershed groups, this is something I know I've personally dealt with. One way we tried to improve upon that a couple years ago was, we kept going into communities to talk about climate adaptation, and the communities wanted to talk about affordable housing. So we started showing up at every affordable housing conference and we had our name tag to show that we were listening and that we cared and that we weren't just listening to our issues, but that we met new partners that work with us and go to different communities and some are hopefully going to join our board. So just showing up for other issues that are outside of your specific watershed group and having that presence can really be powerful and show that you really care."

"I feel like many watershed groups are well intentioned there, and I feel like they're environmental advocates, but I think that has a certain connotation that drives away certain people. And I think there are partnerships that can be gained in different parts of the community and I've said this before, like the sporting clubs. People who actually use their groups. That's a really hard conversation, I think, often to have because it gets into politics, right, but I do feel like there's allies out there that aren't being captured."

A focus group participant also highlighted the need for watershed groups to find common ground with partners, and that assistance with making these connections would be valuable.

"I think part of it is finding the common ground. Yeah, we have different groups working for different things, even though their end goals are the same. I think the way they need to work and need to come together is across the board the same, it's uniform, and I think maybe getting that message of, we can work together, maybe you want X and I want Z, but ultimately there are two things that go together, so together our voices are louder and more powerful. And you know, so we don't necessarily have to work at cross purposes, we can come together ... I think somebody to filter through and connect those dots for people and bring those groups together and look at things or to say, hey, this is working here."

Academic Institutions

Connecting with research partners

Watershed groups are interested in collaborating with academic institutions on research and monitoring projects, especially when similar methods can be shared across the region. A barrier to this is knowing who is working on what. The Hudson River Subwatershed & Tributary Research Network (THuRST) exists to help meet this need but struggles with the same capacity issues as many watershed groups. Watershed groups could help researchers connect with communities more meaningfully, including matching emerging research questions with local needs. Watershed groups felt that academic institutions should share their technical resources to benefit communities. They can offer expertise that may not exist in the watershed group itself.

"If somehow the [Hudson River Watershed] Alliance could help pull together methodology more than anything else, to know what is where and what professors are interested in doing that, because that could be a pain. I could really see that being a time-consuming irritation for professors who are, as you know, super busy. If something like that could be worked out with any professors who are really interested in making that happen, that would be terrific... [G]enerally you want arrangements to be win-win situations. And I'm sure there are a number of situations where certain professors would be interested in having the human resources to do a project that they were interested in, that there was mutual interest in, that kind of thing. I would think that could work somehow, so that would be great."

Focus group participants from academic institutions discussed the challenge of wanting to support watershed groups, but not having incentives within academia to do so. Faculty need to do their own research and may not be able to provide long-term leadership in running a watershed group. However, colleges and universities can step up and play a leadership role, potentially in other ways.

"And then also because there wasn't really anybody at [the college] who was specifically trained in this work, we were all coming at it from other backgrounds... It wasn't something that I was willing to invest 100% of my time in, because I had other research goals that I had. So, we needed the community to kind of take over the running of the watershed group, which had always been the intention, but then there just weren't the people there to do it. And so eventually... those of us who were actually involved, just reverted back to the research that we also want to be doing... [I]f it were to start up again, it would require either somebody from the community coming forward to do it or somebody being hired by [the college], whose work this really is..."

"This goes back to academic leadership, and I can't remember the number, but there's like 40 or 50 colleges and universities in the entire watershed, Mohawk-Hudson watershed. And they can really be leaders and they have been historically but I don't think they are right now. I mean, there's a lot of pillars that are doing good stuff, but in terms of sort of the overall, how are we

making these watershed groups successful, the glue that binds them may in fact, may be academia. And the issue that [another focus group participant] had noted about the reward system in academia is not made for this, I mean, it's just not made for this."

Working with students

Student turnover is a challenge to keep projects going. Others in the group need to take on leadership to make sure projects are sustained.

"...as students become involved, come up with a project, and holding it together is, from year to year is a natural problem, because the students move on. I mean, that's just the nature of the institution. And if you don't have an instructor or professor there who will keep that alive, it's likely to wither, or you can just keep going back in and teaching another group, another class and hoping that they carry some ideas forward, wherever they go."

"I got a... grant that paid two students, and their main goal was to help build capacity for the alliance. So, a website, run some meetings, handle all the emails. You know, what a paid staff person would do. Which was great. But in hindsight, again, I think it was actually detrimental, because when the students are doing all that work, everybody else stopped doing work. And when the student's grant ended, and they stop doing work, nobody else stepped back up."

"... I would say that's the drawback of working with students. They're great, but the amount of time that you get with them is really limited...."

While watershed groups and municipalities may be eager to work with youth, it can be a challenge to sustain programs with both high school and college students. Focus group participant:

"There was a time when we had a group... of high school and young college students who got together and decided that they were going to ask the different town boards that they were in the communities of whether or not they would be interested in pushing for climate action. And they wanted to develop a list of priorities. But unfortunately, they had a lot of passion and were able to do a lot, but to build a sustainable group that can withstand them going off to college, which is what ultimately broke down this group."

College students may not have experience working or communicating with broader communities.

"...students for the most part don't have experience speaking to community groups. So, when they come and they present some of the things they have been doing to us, I think in the future we may want to provide more coaching about this... We're not academic, and a presentation of academic-generated information to an at-large community group is a different challenge than presenting that information to someone inside your own academic community."

An interview participant that works at an academic institution described the need for staff positions at colleges and universities to help faculty move work forward and connect with communities.

"I would love to have a technician staff person, because students are great, but there's a lot of turnover... Rarely will I ask a student to work with me two summers in a row, just because I want them to have other opportunities. ...[W]hen I'm running out of time, maintaining my field equipment is a lot of times the first thing that gets bumped off of the list to do. I can't figure out how to make it a priority when my schedule gets full, so having a staff person that is around consistently."

Municipalities

Working with counties

County agencies can provide valuable support for watershed groups. However, some watershed groups do not get support from their county agencies, and that represents a challenge. Not all counties are used to collaborating, and they have limited resources, including staff and funding, to support watershed groups. Some counties lack planning capacity, and the various departments within county government may not be coordinating well internally. Watershed groups may need information or case studies on how best to partner with county agencies.

"[T]he department that he's even in is the Department of Economic Development and Planning. So planning is not even its own department in the county. It's tied directly to economic development. So, how awesome is that going to go, you know, planning efforts that take property off of tax rolls. Aside from being able to make the tourism and recreation argument. That's why I think we're one of those things too, we're just not getting anywhere."

"I find that sometimes the agencies in [this] County don't know how to deal with each other. 'We don't do that. You have to go over there.' That's what happens, you know. Nobody has a clear idea. I don't think the county executive has a clear idea. I went to the county executive's office right after I became chair to introduce myself. I said, 'We're the [watershed] group and we want you to know about us. This is just a hi, how are you doing, kind of thing.' I spoke with his executive assistant. She listened and took some notes about the [watershed]. I mentioned that it might be nice to have a county-wide environmental fair. Their ears perked up. You know, that's what they like. They like a big festival or something. They don't understand the importance of the individual creeks. Maybe they're not attuned to that. That is one of the things, that's the challenge. Getting them attuned to what they have in their own county."

"Building partnerships with, again, this kind of comes down to getting people on board for... our mission. So getting communities within the watershed to unite, whether that be having separate meetings outside of the [watershed group] with constituent communities to discuss these issues-- but also strengthening partnerships with our state, county agencies that are

working on these issues, and trying to pull together all the resources that we can without reinventing the wheel. If there's a group that we know that's working on something, trying to form a better partnership with them to share resources and ideas.... But also, working with our county leadership, our state organizations... they also have a lot of recommendations for how to improve these situations. So getting better partnerships with them and more idea sharing."

It can be challenging for counties to partner with a volunteer watershed group. An interview participant that works for a county agency described a situation where they agreed to assist a watershed group only if other county-level organizations and agencies were involved, too. Limited watershed group capacity and staff turnover are challenges for these partnerships.

"Early on I remember we had a meeting... and I said that if all three of those entities, the Planning Department, the Land Trust, and our office would all agree to assist, that we would sign on to provide staff support for the group. Because you get these watershed volunteer groups, they have good intentions, but they often don't have a lot of means or infrastructure or whatever to do the work. So you know, personalities in staff change and the person that was the land trust representative at the time... she ended up moving... and things changed, and we haven't been too involved in that for a while."

Building relationships and participation

Several watershed groups spoke to the challenge of building relationships with municipalities, but the need to do so to accomplish their goals. One key barrier is a lack of capacity in watershed groups, including staff time to sit down with municipalities and better understand their needs. Several watershed groups expressed an interest in having municipalities come to them as a resource, even though this currently doesn't happen very often.

"In an ideal world, if I had staff to throw at it, I want to repair the relationship with [municipal] folks..."

"But what I find in our work a lot is that unless you sit down across the table from them and ask them what their problem is, they're not going to call you and be like, hey, I have a problem. And that's, I think, would be a focus for someone like that [future staff position], would to be sit across the supervisor's desk and say, what do you need? How can I help you? And that person would have to be multi-faceted not just, you know, environmental, but economic development... So, I think that a lot of the work I've done started out that way, of that sitting down with them and saying, what do you want? And then, it kind of starts to transition into them calling you, and other towns calling you, and that kind of thing. That's when, you know, I think you've been successful. They're asking you, and you're not chasing them around..."

"And the ECC donated some money and the town board donated a little bit of money. But we haven't done an ask for all the municipalities yet because a couple people... said they were going to work on the silly letter I put together, and that never happened. But I think this year, we'll be at a place where we can announce ourselves to the municipalities. I mean, I would've

bugged you if it was really time to do it, but I didn't really feel like we had the capacity last year to do that."

"Some we struggle with, like [municipality], we can't seem to establish a firm relationship or get a good, find someone who's willing to represent [that municipality]. We talked about that in the last meeting. How do we bring in [another municipality] – we can't find a good representative, even when we meet there."

"...we've not been successful in getting data out of one of the towns. And they have a particular professional running it... So, since it's not easy to solve, that would take time and commitment, and so I haven't given it that time and commitment, though it's important."

"Well, [the local government has] the resources to put the word out a lot better than we do. People have to know about us before they can go to our website, they have to look us up. The town can send out notices. They have more resources in which to communicate with people... I think the town has a better chance of promoting the health of the [watershed], if they want to do it... The town might be able to also help with grants and funding. Also, I think they have access to labs in case they want to do some research and monitoring. And also, they can begin to start maybe helping with what goes into the [watershed]. You know, this is a planning and a zoning issue. They would have control over that, or at least be able to regulate it somehow. For the health of the creek, there is also stream restoration. So there are a lot of benefits if you have somebody behind you with political power. I'm not afraid of that, but some of the group has been reluctant. 'What are we going to ask for? How are we going to look?' I don't care for that. I want to go ahead and do it and see what happens."

Municipalities need to understand the value of being part of watershed groups and their networks, especially funding opportunities. Justifying the need for their participation may be a communication challenge.

"I think, again, it's people don't understand. They don't understand the value of joining the groups, networking with organizations like yours and all the other ones that are out there. Meeting the people that know the people at the state level where you can go to have this dialogue about what do we have to do. We need \$8.3 million. What do we have to do? Even if we could get the money to fix the electrical panel at our wastewater treatment plant, what do we have to do?"

"...you can't make people come to a meeting who don't want to come. So you have to entice them to come. And once they get to a meeting, they have to be able to see a reason to come back. So they have to see what's in it – it sounds selfish, but it's almost like, what's in it for me. But you have to try and get every community to understand why it's important they participate. And I guess that's the biggest challenge. Trying to get that communication together and get that message out there, that communities realize that it's in their best interest to be involved. And the [watershed group] can be a source of help and information and worth the time and effort."

"We do have a pretty good government representation within our group, but as most of us know, a lot of the stuff gets done through the government lens, so it would be great to have more of those agencies represented. It is sometimes hard to get organizations in general to take on more work... But I would say increased participation from some county agencies as well as some town and village agencies would be, we would love that. But again, I know everyone is extremely busy so how do we go about that? That's another obstacle I think that we are having. We have a lot of great people at the table already, but some people might be like, why do you need more people here? You already have county representation, you already have village representation, why do you need more? So yeah, I think that's another obstacle that I'm still trying to navigate, and learning from those that have been in government longer than me, too."

It can be a challenge for watershed groups to define the ask when reaching out to a municipality.

"And also, one of our problems is, what do we ask for? Because that's been a stumbling block. Some of our group thinks we have to have a definite ask, we can't just go before these official people and not know what we're talking about, although we do, but we should have an idea of what we want. And so, we've worked it out with [a regional nonprofit] that we have an ask, we're going to ask the [municipality] to do some of the same type of nutrient studies he's done up in [another municipality]. And we do have to ask because that's money, that's time and money to the town, and he's an employee of the town. But it's a very simple task, it's just an opening. My feelings on these things is, you don't have to have it exactly right, you just have to want to do it, you have to get out there. I'm a little aggressive this way, I want us to get out there and start interacting with the township, because we haven't done that in nine years and it's time. Even if we get half of it wrong, which I don't think we will, it's important we start the process of interacting with the government."

Getting municipalities to work together is a challenge, including taking the time to do the outreach that's required.

"The interaction between the [municipal staff]. It's hard. It's hard to get people to dedicate the time to do that outreach... It's not that much of a stretch. But our guys are busy. It's not like we have an abundance of people. So to take time out of your day to go to [a different municipality] ...and say, 'What are you doing, how are you doing?' Something is not getting done. We're trying our best to get that done. What bugs me the most is that."

Focus group participants also shared the challenge of getting municipalities to work together across watershed boundaries. This can also be an organizational challenge.

"One thing that's missing with all of our watershed groups is this mentality of I can only think to my municipal boundaries. Watersheds don't work that way, and that's part of the problem is working with communities that maybe don't necessarily work together... It was such a lost opportunity to do something that crossed those boundaries."

“What we have is very active involvement of municipalities, but we're very focused on the MS4 permit requirements, many of which overlap with what you typically see with the watershed organization. Public education, public participation... So, it becomes an organizational challenge to try to figure out how to integrate the concept of watershed groups and watershed planning. There's so many watersheds, where do you start? ...[I]t's kind of an overlooked problem, particularly for the urbanized municipalities that have these MS4 permit requirements, and then simultaneously the benefits of watershed planning, but the mechanics of it really become a problem.”

Municipal staff may be limited in the work they can do outside of their municipal boundary to support the watershed.

“I would say our [new county] expansion is both something to be proud of and something that we continue to struggle with. Some of it is jurisdictional, so our staff who work for [municipal] Parks, cannot go into [a different] County.”

Municipalities may be biased against other municipalities within the watershed, and it can be challenging for a watershed group leader or organizer if they do not live within a particular community.

“And I didn't even live [close to the stream] when I was working there, which was a handicap... I mean, it's part of the watershed, but you know, and so, saying you're from [municipality] is like saying you're toxic, orange glow and all of that.”

Watershed groups may not have a strong understanding of MS4 compliance issues and the potential fines that drive that work. The idea of watersheds as a focus area may not resonate with MS4 municipalities that are so focused on meeting regulatory requirements. They may be missing out on an opportunity to partner with watershed groups or concerned community members to help them meet the requirements of their MS4 permits. Communication and terminology may be a barrier to developing more mutually beneficial watershed partnerships. Two focus group participants:

“I think that one of the elements of the MS4 program is it's all driven by the Clean Water Act SPDES program... and so we're very aware of our SPDES permit and other SPDES permits and the industrial sector SPDES permit, and that drives us. You know it's the penalty, the \$37,500 per day, and I don't think folks who are, let's say working in watershed work, understand that's our driver. You know that if we're pushing back, saying we can't do something, it's because we have to do so many outfall inspections otherwise, we might be fined and the purpose of doing the outfalls certainly fits in with water quality protection, but folks don't understand that so that's like a huge communication element and it certainly informs our perspective on things... I always put the [Hudson River] Watershed Alliance newsletter out there for the group. It's not something we spend a lot of time on, it's mostly for my purpose to inform them that the Alliance exists. I think some of it is I'm trying to promote the idea of watersheds, just in general, but I don't think it necessarily resonates with the group, you know what I mean. But some of what resonates

with our group I think it's the reality of being so embedded in regulation. I'm trying to find some program that might try to highlight that common ground. I don't even know what the program would be, but I think that could be informative.”

“I think one of the biggest barriers is that connection to the municipality. I mean, often hear or go to municipal meetings, and there's always that one person in the room complaining about something and people roll their eyes... [H]aving a voice that is heard and respected by the municipal officials, so that if it's a group coming forward going, we represent this watershed, it's in our community, we represent it, and we have these concerns, or we want to do an outreach event. And to have those voices heard, and then to get action from the municipality. I think that's the biggest hurdle, is making that connection. And we look at things... I don't like the term stovepipe, but I'm going to use it right now... Yeah, we're an MS4 community, but we're also a watershed community. We're working in these watersheds, instead of, we're working on stormwater, and then this other group is trying to do almost the same thing, but we're calling it something different... [Municipalities are] not conceptualizing this routine getting together to deal with the MS4 permit as a simultaneous opportunity to take advantage of those interested citizens who are actually kind of worried about water quality there. They're like sort of compartmentalized in the crabby citizen camp, as opposed to the potentially engaged volunteer person who could be helpful in getting their MS4 permit implemented... It's all kind of trying to do the same thing, but the wording and the communication and how we're each talking about each other kind of isn't creating a holistic look in people's minds about, well, what are your advantages or what do you bring to the table that's an advantage, and how do we capitalize on that and move it forward for the shared goal? Which oddly enough, I think generally speaking, people do care about water quality, across the board. It's been a consistent, like, 'Oh yeah, the work is good that we're doing, we hate the regulations, but it's for a good purpose.' So, I think there's an opportunity there with language-ing, a really sensitive outreach on multiple parties to potentially capitalize on sort of moving forward in the good work.”

There may also be opportunities for watershed groups to collaborate with municipal Conservation Advisory Councils, Environmental Management Councils, and Climate Smart Community Task Forces. One focus group participant described how the Dutchess County Environmental Management Council used to have paid staff, which was really valuable for watershed work. There is a need for clearer information on opportunities for municipalities and watershed groups to collaborate. Focus group participants:

“...[T]here used to be this thing in Dutchess County called the Environmental Management Council, I think, it was the EMC, and they had paid staff. And we used to work with those people on various things all the time... and not having that support any longer is something that I think all of these things suffer from. And I also don't know what's going on with the CACs in the towns, the Conservation Advisory Councils, I haven't heard anything about the activity of those in years. They used to be really active and working on zoning stuff and I just, I never hear anything anymore.”

"I see an opportunity there... I'm seeing there's tons of traction... around the Climate Smart Communities program. So here we have these carrots for municipalities and grants and then money recognition. All that kind of stuff, so to have a more explicit cross walk as far as where watershed groups can support the vulnerability assessments, especially Pledge Element 7, but I'm sure there's actually particular ones around watershed plans within the municipality. And that way you can say hey, we can do something for you, too. Always, always a good way to get your foot in the door, gain some traction with the municipalities involved."

Limited capacity and other priorities

Municipalities have limited capacity, and are balancing a number of other priorities. This is the case both for elected officials and municipal staff. This is a barrier for their participation in watershed groups and support of watershed projects. Watershed groups need to continue to build credibility through relationships to overcome this barrier.

"I wouldn't say that I had great success with the municipalities. I've often beaten myself up about why that happened. Was it me, was I not connecting properly with them, what was that? I think many of the municipalities were just so overburdened with everything else going on in their community that – I almost would feel like sometimes I was being given the floor at the planning board meeting or the public meeting, I was given the floor as a polite way... and then we got to the real business. So I kind of felt that in many communities, but then there were other communities that were just more, the people on their own boards were more into the environment than others. So some communities were much more receptive."

"[This] County is one of the poorest counties in the state, and... our municipalities are relatively poor. The taxes are kind of low, but people don't have much money to pay for them, anyways. I mean, relatively-wise there, we just don't have the – for example, our municipalities, most of them are, there's no paid municipal officials at all. They have full-time jobs on their own, and they volunteer. So the dedication or ability to input hours of time and effort into things that aren't just business that has to be taken care of, like collecting taxes and deciding on those things and paying for the fire department, which is mostly volunteer anyways, so they're not even doing that. Taking care of water, if there's a water system... So beyond that, there's definitely no like... some communities, I know Kingston has a sustainability coordinator. That does not happen up here. And even just getting, helping a community establish a set of zoning laws or even get there. It would take education and time, somebody's time. And whether or not those things would actually be you know, without some major effort or some person being able to spend that time to organize the meetings that have to happen around these things or even comprehensive planning stuff. There's very little support for people to do those things."

"Even if I had trained, skilled technical staff and I had the money and I had some kind of support structure for other kinds of advice that I need, then you've still got this [barrier], local municipalities. I mean that one of the common, I don't know if you want to use the word explanations or excuses, is that they have so much to worry about, that it's hard to get them focused on conservation and environmental stuff. And I don't know how you cut through that."

Like I said, we're trying to do that with [one municipality], and there's certainly not an easy test case. So maybe there's no better answer than, you've just got to build credibility and keep plugging."

Small communities lack capacity for planning and need technical assistance. Watershed work can be a low priority for municipalities. Two focus group participants:

"A lot of the small communities... the capabilities and the wide bandwidth of communities to assist in it would be beneficial. The elephant in the room here is funding and technical assistance that can be used to help communities that don't have the bandwidth to proceed with this plan, and it's nice to see that a group of people in the community care about the water, but if there is no assistance for them other than getting together and talking about it every once in a while, and no professional guidance for them, then they're gonna disband and there's no future for that. So, I think one of the issues we should look at is looking at technical assistance."

"Being in the trenches on the political side, it appears to be very low down the totem pole of things to do and too low for what's actually going on in the watershed, and I would like to see it move up higher."

Elected and appointed officials come from all different backgrounds. There is no "mayor school," and they need to learn on the job how to balance complicated municipal problems. There is a learning curve for watershed management, and a need for training. Two focus group participants that had served as elected officials had a conversation about this challenge.

"The reality is, and I'm a good example of that, is people come to public service from all walks of life without any prior experience. And generally, we don't have anyone to run for town supervisor, so let's see if [name] will do it, kind of thing. So [name] walks into a job that she has not been trained for, and has to deal with a series of problems that she has no knowledge of... it would seem that it is an opportunity for the DEC to put together some training modules knowing that the people that are making these decisions on the municipal level could be me, the real estate broker in town, or the guy who owns the lumber yard, or the guy who has the oil company in town – has to make decisions on issues and scientific issues in hydrology and we don't know or understand. Everybody in my town wanted to dredge the rivers, because that's what they did 100 years ago, and I had to learn that's not the way it's done anymore and why, and then go through a period of giving that information. I gave up on giving it to adults, and went and took some people from the DEC and talked about making a model that showed a stream with people from Cornell Cooperative Extension, and we went into high schools and started showing kids about it, and why we don't dredge and what happens when we do, because it was the only way to get the message across. So, you have the capability of developing some training tools or webinars, we don't do public meetings anymore and I think this pandemic permanently changed a lot of that stuff, but soil and water conservation districts and other places have the ability to put together some education and educate the people who are making the rules and regulations and planning boards who are approving development on things need to have an understanding of that town boards and such."

"I think [other focus group participant] touched on how surreal it is to become an elected official. And there's no mayor school or place you can go. You're dropped in... So, it's like this big bowl of string that you're constantly pulling on and finding out all of the hundreds of things that it's attached to. And it was a lot of fun to do all of that, but when it comes to the watershed problems and you are the executive or you're on the board or you're a decisionmaker for an academic community that is just a part of that political boundary inside the real boundary where all of the action is taking place and the watershed. What we're in danger of is people dropping work that could be done because it's just too big to wrap your head around or too much to be able to figure out how to solve the problem by persuading the municipalities that is not even adjacent to ours and convincing them to help or getting them to do this..."

Many municipalities prioritize economic development, which could come at the expense of protecting watersheds. It can be challenging to convince municipalities to implement stream protections. There is also a tendency to pit conservation efforts against job creation, and frame them as anti-economic development.

"Economic development is, you know, never takes into account the environment. Conservative town governments are a big obstacle, who don't see the value in things like riparian protections."

"This whole new issue, allowing development to be seen as more important than the stream, a clean stream, is kind of a serious challenge."

"And a pro development at all costs mentality [is a barrier], which says that somebody coming in and bringing rateables and jobs, even though they may be low paying jobs, is more important than the quality of life for the people who live there. Recently, within this week even, we've seen [a county-level economic development organization] pushing projects forward. And if you look at all their brochures, quality of life and concern for local residents never appears in any of their literature... They don't have a balance of maintaining a sense of place. To their mind it's how many dollars of rateables get brought in, independent of what it does to the existing community."

"It was really tough during those recession years, or whatever we're going to call that period from 2007-8 to 2012. To talk to people about anything, conservation, because anything conservation was definitely against job creation, and there were just too many people unemployed, particularly in our area."

"One of the big things that I think that we all grapple with, is that even though we have a town board and a supervisor who are very open to water resource protection, we're not immune to the siren call of developers. And even though we have less of a problem with that, I know that other towns in the area do. It's something that we need to be able to deal with. That's one reason we had that forum on property rights and water resource protection because, you know, I wanted to get the word out there, not just with research about water, but information to people about how their daily attitudes about the place where they live can affect the quality of

their water, and how we need to be careful about how we make land use decisions because, they affect our water.”

“We used to do a lot more subdivision reviews and I used to tell people that you’ve got to figure out how far you can push, because if you push too far, then everybody just shuts you down. So, it’s easy to say they should recycle their roof water and they should do this and that and they should use renewable energy, but you very quickly find out if you’ve gone too far, because not only will the applicant and his consultants start going after you, but the town itself will stop backing you up. And I don’t know what you do about that. Unfortunately, it seems like sometimes things have to get to the critical point before people start... There’s a big risk in how far can you push. And if you just become a huge thorn in everybody’s side, then I think there comes a point where you lose a lot of your effectiveness. So that’s a really delicate balance there.”

A focus group participant from a county agency mentioned the potential opportunity to better connect green jobs with environmental work by bringing together people from trades and wastewater managers.

“...[C]ounty government is looking at how we make jobs for the future, and how we can have opportunities within the county so that you stay here. But a lot of it is within the trades, so a large contingent of water green jobs, ag jobs, and participating in those conversations, and it is really interesting that you have two sides of the water management. Our wastewater managers and small municipalities often get the job and then they figure out how to do it and so SUNY has a program for wastewater management that gives them training... But then you’ve got the resource item water, where people get their degrees in environmental work, and join some of the watershed groups or some of the agencies. So it seems like there is a much larger group not just in outreach and education, but also in people who are already in these roles.”

Municipal turnover

There is a need for continued municipal engagement and outreach, due to municipal turnover. It can be difficult to gain traction with municipalities when elected officials who support watershed work are no longer in office.

“Then they got a new town supervisor, who I was able to work with... He agreed on a lot of things. And he was working toward correcting a lot of things. He didn't win the election. Now we have another town supervisor... So, I shall see how I fare with him!”

“I’d have to say, you would present to your municipalities and then there’d be an election and all of those people that you made good friends with and had connections with are gone. And now you’ve got to start all over again, and that’s a real bummer. It really is starting all over again. What’s a watershed, here’s the map, it’s so repetitive sometimes. When there was the changing of the guard in the municipalities, that could just crumble everything that you built.”

“And the elected leaders were not one hundred percent in agreement. They were sympathetic, and did not get in the way... and then lots of bad leaders got elected. So there was one or two bad leaders, but they were surrounded by good leaders, but when the majority of bad leaders existed, the good ones had a hard time speaking.”

“I think there's also still a strong need for continued municipal engagement and outreach. A, it's such a difficulty because of the turnover in municipalities. And then the other major problem of dealing with municipalities is that, especially in this area, it's so new and these ideas and the concepts of looking at your landscape in a watershed way and interactions between municipalities are very rare, I would say, in this area. Just, again, because of the rural nature, you kind of have to deal with your municipality and your constituents and that's – and also, I think because of the size of the watershed... it so does not occur to the [one municipality in the headwaters], that the things going on up there are impacting the [municipality downstream].”

“As things progressed, we had new supervisors elected... So, the crisis brought in some new elected supervisors, because they responded differently, or they were angry, or so that natural crisis brought in the loudest angriest mouths in the room. So a lot of really good community leaders got voted out. So all of a sudden we had not a watershed approach to solving [watershed] problems but a municipal by municipal by municipal approach. So all of a sudden everything was, each person for themselves, there was no consensus, and it just got worse and worse.”

Focus group participant:

“At the municipal level, there's so much turnover with elected officials and staff, and you could be doing really good for 2 or 3 years, and then there's a new town supervisor or a new mayor and everything is kind of goes to 'ship' and it can be really hard... I think it can be very frustrating for watershed groups trying to do long term projects when the game keeps changing every few years.”

Municipal turnover makes succession planning even harder for watershed groups that are structured as an intermunicipal council and could result in losing connections with municipalities.

“And all of the people involved that I have worked with as elected officials, they have limitations, let's put it that way. I worked with a supervisor in [one town] for four years... who was just recently up for re-election. And did not get elected, and was very active in the group. And now he's gone. And that's part of what we deal with all of the time, because you're dealing with people who have terms that end. And when they go, then they go. And that, you know, doesn't always mean that there's somebody who is ready to step up and say, 'I'll do that.' So, it takes a lot of networking and being able to keep reminded that we are here and what we're doing. And as I said, a lot of it is phone calls and showing up at meetings when they don't expect to see you, and they say, 'Oh how nice of you to come!' Yeah, getting out in front of them.”

A focus group participant that was active in a watershed group:

"...[B]eing involved in the political side, where things change rapidly and communities are not always on the same schedule and thought process, we saw many people who were in leadership and were good advocates for watershed change become completely different people with completely different priorities. We saw lots of people like myself come in who had no idea of why it was important to think about the watershed."

Land use and local laws

Municipalities may be resistant to adopting zoning, local laws, or other stream protection measures.

"What's not working so well is... municipal willingness to act. ...[T]hey love the [stream], they love the benefits they get from it. But willingness to even lay down some zoning or even some very, maybe, superficial even protection measures, they're just not happening... Because I think politically it would be unfavorable for this area, especially because of the political leanings of, specifically [this] County."

"...[W]e're working with a couple of very rural communities without zoning or having a comprehensive plan. And so to come to them and make some land use recommendations is kind of a square peg for a round hole, to get them to adopt land use regulations specific to protecting the watershed and tributaries that are running through them without a real framework for land use."

"Yeah, [barriers to meeting goals are] existing zoning laws and existing state laws."

"I think that's a big challenge, is getting some of these codes – some of this stuff going into codes, and I don't think that the new town supervisor has any commitment to it."

"The tremendous increase in impervious surface, the resulting runoff from it is probably the biggest thing. And there's a bunch of new projects that are to come. So those are future things which will increase the magnitude of the problem unless we can get some laws in place to protect that."

"The [county] put together a riparian buffer town law, but it's not taken off at all... It's a generic thing that the county... put together, and it's really hard to pitch it to communities, cause they have to enforce it."

Outdated municipal plans can allow development to come in that may not be compatible with local interests and needs. One interview participant noted the need to update the municipality's comprehensive plan to be more in line with development that they'd like to see.

"Much to my chagrin, being on the planning board, I did vote to approve [a development]... I worked really hard, though, on the water issues of that approval. ...[W]hen you're on a planning board, and they meet the zoning, the zoning allows what they want to do, it's not something we can say no to, without a really good reason. And if they work to mitigate the issues, then there's no saying no. We just have to mitigate the impact..."

Watershed groups need more case studies for municipal actions, like the Community Risk and Resiliency Act (CRRRA) model local laws, along with support to help work through implementing municipal stream protections.

"Well, I haven't dove into it, but support, perhaps with looking at some of those- because they just came out with those model local laws in support of CRRRA [Community Risk and Resiliency Act]. Because I think there's a lot in there, and I finally I feel like we have something we can at least point to as an example. So, I mean, support maybe in that way of some case studies and some things, some success stories, some, you know. So, through our work with doing the NRI... we had a presentation by... the Estuary Program on doing just that, and I thought those were some of the most intriguing stories about ways that the NRI can be used to help protect the resources -- and water resources obviously was a big chunk of the... NRI, so maybe some support on how we can help easily facilitate getting the municipal level protections or things like that done."

Getting municipalities to take action

It can also be challenging to work with municipalities to solve water quality problems. They don't want to be blamed for water quality problems, but many lack an understanding of the science. Watershed groups want municipalities to use their water quality monitoring data in a meaningful way.

"Well a lot of it is it has to be focused on [a municipality] just -- we have to be very careful about this, because they're very sensitive about being accused of being the main source of phosphorus impairment in the [watershed], but I think the biggest goal for me is to get them -- you've got to get past that initial defensiveness, you know? Like the [municipal staff], he's a smart guy, he's a professional engineer, and he was arguing that the phosphorus can't be coming from the [municipality] because phosphorus comes from farms, you know? And I was a little surprised, I mean, I wasn't surprised at the defensiveness, but I was surprised that he would say that, you know, because it reflects a lack of understanding. So my goal is that we would sort of get past that defensiveness and get a better working relationship to get some of this stuff in place that will address phosphorus runoff."

"If we get those findings back from your lab work, so what do we do now with it? Where does it go now? And does it have, is it powerful enough to get an administration or municipality official to respond somehow or another? But we're signaling that there's a potential danger here in this stream that's going through your town. And it was a concern. I don't think it's been satisfied yet. But knowing where the data that you're collecting, first, is it quality enough to be accepted by a

municipality, or are they free enough just to ignore it, and just say, blow you guys off. How to get them to act on information like that, is a tough one."

There are also challenges in reporting problems when municipalities don't take responsibility.

"We had stormwater protection workshop, and all, and illegal outfall classes, and all...After those classes, we made appointments with each of the municipalities and discussed it with them. And so the question was, 'Well, okay, what is the protocol that you would like the town, municipalities, that you would like to see, related with reporting of what we think are illegal outfalls?' And they all responded, 'Well so and so, or so and so, or I am the supervisor, etc.' ...It was within that same week, the weekend, I happened to be driving along and saw the [stream] the color of milk. So, I just naturally followed it up. And identified the outfall, which was coming from underneath the [municipal] facilities. Well, that was a Saturday. So Monday morning bright and early, I was there to talk to the supervisor and he was very open, and said 'Yeah, well we'll look into it. We'll get the engineer,' and the engineer got all the maps out and the engineer says, 'Well, that outfall doesn't exist.' It wasn't on any of their maps, and supposedly, looked like it was an old outfall from who knows when, when we put in this facility it was already there and we didn't even get a map, we don't know anything about it. Well, the disappointing part of it is, 'We'll get back to you.' Which never happened. So that's the kind of relationship that's frustrating at times."

Municipalities need to invest in infrastructure, especially where it is causing documented water quality problems. A potential role for watershed groups is to encourage municipal focus on key issues like infrastructure improvements. There needs to be political will in place to make these upgrades, or to take an innovative approach when necessary.

"For the watershed... I would love to see some of the vast amount of resources in these communities be truly invested in infrastructure. It is just profound to me that we are like one of the wealthiest ZIP codes in the country, and we are still constantly dealing with these ridiculous problems that have very clear solutions. You know, waterfront development. Like how people are talking about waterfront development freaking blows my mind. That's less of a [watershed] issue, at least where I am. But you know, development, wetlands, sewer systems, roads, public transportation. There are tons and tons and tons of already existing solutions. I would love to see the [watershed group] be a thorn in the side – not the county... but the county as a body politic – saying, 'No, we should be paying attention to this, not this. We should be thinking about this when we do this.' That kind of stuff."

"We pretty much know, based on... water sampling... what the source of pollution is... They mostly come from two towns upstream, and it probably has to do with very old sewage infrastructure, with very bad stormwater management creating cavities under the infrastructure, and then the infrastructure just cracks. So, do those towns that have neglected their infrastructure, do they have to carry the cost? Do you want to create some type of system that the towns would have the incentive to not just solve the problem as it impacts them, but think about the watershed as a whole? That requires a different political reality... I mean by

that, that the restoration goals... require funding, require public investment. And public investment is dependent upon political reality. So, for example, we see new condos being developed on the [waterbody], on potential wetlands, they are developing commercial, industrial and residential projects everywhere, because it is different towns and they are all trying to prepare for the recession, so they're just giving whatever land they have. That's in a watershed that is constantly being flooded, that's a huge issue for a watershed. So, that's one thing. Other than that, this is, as I mentioned, a very impermeable watershed. It is very suburban and to change that, to add permeability, again, you need public investment, you need to create incentives for commercial and industrial developers to upgrade infrastructure. They do that in New York City for example, and I came with all the knowledge I had from the city, and different projects they do in the city, and I bring it here to [this municipality] or to [this] County, and they don't really know what you're talking about. They're like, 'Oh yeah, we just put a bioswale in the Main Street,' and it was an interpretive sign to teach about bioswales, but they wouldn't go into giving incentives to local developers, rezonings for environmental goals or..."

Watershed groups could also use support from municipalities for stewardship programs.

"I was able to speak to the need of having a stewardship program coordinate and work together with the municipality, with the Department of Public Works so that if we are removing vines, we have their trucks to take those vines, things like that."

Watershed groups are also interested in supporting municipalities with their priority projects, such as culvert assessments and right-sizing, but are not sure how to do so.

"This is going to sound really specific, but I have an understanding that we should be doing more along the lines of culverts and helping towns and all that. We haven't found out how to make that happen."

Lack of participation in or understanding of local government

Watershed groups may not be aware of or engaged in local issues, and this can result in a disconnect between municipalities and watershed groups. There is a lack of participation in local government overall, which also impacts watershed work.

"Now, part of all this problem is my fault. Everybody's fault who lives there, because we've all become lackadaisical, and we don't go to the town meetings."

"Oh my god, nothing is working, seriously... Civics. Civics is not working. And it is not because it can't. It is because it is not emphasized. An awareness of where our critical resources lie. And what shape they are in. Like drinking water, clean air, homes. I mean it is just like, there is so much that needs work at this point at the culmination of a couple of hundred years. You know, so, we have to take our little bites every day... And too few people are doing too much."

Watershed groups need to have a better understanding of how local government works, so they can develop a community of informed advocates for the watershed. There are limited resources currently available to explain these processes.

"I've been trying to be an advocate for water protection advocacy within our watershed, that's not the same with being an activist, but informed advocacy is something that I think we will not get anywhere without fostering that and encouraging it to grow, and so that's a challenge, too, on how to encourage people to be informed advocates for their water resources. And that includes advocates to their local government when decisions are being made that affect the quality of water. And we have a long way to go in that, I think everywhere, we still have a long way to go. Yeah, that's a big challenge."

"I think it would be helpful for people to think about how to interface with government and how it works... Because obviously the things that one municipality does impacts others. It is not just the people that live there. But you have to understand how that works. So you can stop things that are bad. If you understand how they are viewing their process... Because if a problem comes up in the [watershed] and it is in [an upstream municipality], if you have never thought about that stuff before, what would you do? How would you approach that problem? And there is nobody there to help you understand. Nobody in the room knows... I just think understanding the law is really helpful."

A focus group participant also expressed that watershed groups need a better understanding of how local government works, to better participate and create change.

"Well, I often think we talk about watershed groups working with municipalities a lot, and we want them to do that, we want them to be engaged and we want them to be participating, with municipalities on watershed groups. But I often think, like, what if I was on a watershed group, what would I ask my municipality to do differently if I had information about water quality that I thought was important, other than presenting it to them? Would I ask them to change zoning? Would I ask them to make decisions differently at a local level? And I think to be able to start thinking about how you would present or participate with the local government, you need to have a pretty good understanding about how local government works and how local land use decisions are being made in a community. So, I think land use decision-making, I've harped on this probably for years, but I think it's really important, and even though I've been trained in it, and I've been an appointed official in my town, it's still difficult for me to come up with a way to make change, if I had information that I thought was useful to the municipality... I think understanding local land uses is an important skill for watershed groups to have on a watershed group in some capacity."

Lack of trust

Municipalities may not feel comfortable with state or federal agencies making recommendations or telling them what to do. There is a need to balance state support and programs with locally-driven priorities. Mistrust of regulatory agencies may prevent people

from being open and participating with watershed groups. Some municipalities are concerned about being closely monitored by state agencies if they get grant funds or join a watershed group. Municipal officials have a very challenging role in navigating these complexities.

"...[W]e're talking about... towns who don't love government and [when] people from the outside come in and tell them what to do. So, it's a very fine line for us."

"And then I can imagine a ton of property owners, especially in our rural area, not wanting to tell anyone from a state agency where their septic is and feeling like they're going to get – something's going to happen, because there's a strong level of mistrust of regulatory agencies and possible action against people and cost due to that... I think the political landscape is a difficult one, and that's kind of where I think some of the mistrust in government stems from, so it's all kind of connected. In addition, the political leanings also have, a lot of people have, I'm trying to put this the right way, that they won't, they don't want to be told what to do with their land. And again, they see local laws of protection or planning or zoning as punishments. There's a lack of understanding of the benefits of some of these actions, and protections that perhaps could benefit them, that they're not really seeing. They're looking at things as just limiting their freedoms to do what they want on their own properties. The whole rural, kind of, I own it."

"I still think there's a certain amount of mistrust between some elected officials and people who are in positions to be able to monitor and then make decisions for communities and other places, whether it is a state-wide basis or federal level. And therefore, there's a type of disconnect, and a fear that their problems are either going to be unsolvable or else someone's going to ask them to do something that they just can't do. They just can't manage it. That fear factor is one of the things that I have a very difficult time with myself, as being an elected official and also an environmental advocate. Because I've got to look at it from both sides in terms of saying, 'Okay this should be done, but it can only get done if you can get the funding, and that funding has to go beyond the local level.' And I caught that fear from the day that I walked into my first few meetings, and we're told that we had this \$2.5 million project that we had to be able to accomplish. And if we didn't do it, the Health Department was going to shut down our water. And where is the money going to come from? It's the elected officials who are suddenly thrust into, 'I didn't sign up for this,' kind of situation. And then what do you do? It's navigating those kinds of problems that really is the hardest part of the job. Because you feel somewhat helpless in saying, 'I have done my part to help out, and I can't go to taxpayers and see a huge jump in their taxes, because we have a problem that is something that we can't handle.' And then we are fortunate that we have been able to get more attention from different levels, to get that help. But there are still an awful lot of people, when you hear, you can apply to the state for this, or you can apply to the county for this, but they are going to be monitoring you because if they give you money, they want to make sure you spend it correctly. If that is not going to mean other things that are going to happen down the road. You know, no community wants to be put under a microscope, because they are afraid as to what the ramifications would be. I'm sure some of my comments at some of the meetings, people kind of looked at me kind of cockeyed saying, 'What are you talking about? Nobody is here to punish you or punish your community. We are trying to help you. That's the whole point. We are trying to help you.' But

other officials that I work with are sitting there almost like taking steps back, saying, 'Leave us alone.' Because they don't want to get involved in something they don't think they can handle."

"It took me two years to get my [municipal] board to join the [watershed group]. ...Part of the resistance came from all the problems we've had with the DEC in my [municipality]. We've been fined gazillions of dollars... So, I feel like some of it is fear. Like one person on my board voted no to [joining the watershed group], saying, 'Now you're gonna have the DEC here and they are going to be watching us like a hawk and we're gonna pay more money.' I said, they're already watching us like a hawk, because we're screwing up the water. So joining the group isn't going to change anything! 'Yes, it will.' I said-- how? How much worse can it get? It can't get any worse! ...They upped the guidelines for ammonia, so now we have to spend, I think, \$2,000 a month on bugs to put them in the water. I'm getting blamed for that. That's my fault because I brought the water group here. No! It's the [municipality]'s fault, because we are putting too much crap in the water. But, that's the perception. There's the fear factor. That by bringing these organizations in, that I truly believe are beneficial and are the key to success for trying to straighten out the mess and make the community aware of, we have to protect our resources for the future. They're perceiving it as, you're bringing them right here to our back door. Like, they're already here! They are already monitoring the water!"

Municipalities may not be comfortable with watershed groups representing them.

"We still had somewhat irregular, but regular meetings for [the watershed group], but then the [municipality] said, we don't like your environmental approach. You [individual's name], don't represent us... So that was sort of the beginning of the end."

Presenting watershed information to municipalities honestly can be a challenge. They may not want to hear certain information, especially if it might be controversial.

"I think it's important that anyone dealing with any of these places is really involved with the municipality. But having said that, at that particular meeting something came up where this representative from one of our municipalities was upset with the information that was being presented. And that actually resulted in a crazy little storm of negativity towards us, and way over-inflated, but it doesn't matter, it was out there. And it kind of ruptured our collaboration for a time. And it hasn't really yet been repaired."

"Every year they ask me to come in to help satisfy their MS4 requirement so they can say that we had public presentation. First of all, I had to submit to the [municipal staff] what I was going to talk about, because of course he wasn't going to let me talk about anything controversial like phosphorus runoff."

Communities

Making connections across the watershed

Watershed groups need to bring together people from across the watershed, opening up communication to build collaborations. This includes upstream-downstream and streamside-upland connections. and Focus group participant:

"...a piece of it is the collaboration, cause a lot of times these things are now as the waterfront landowners, you know, the streamside people, and whether that's a landowner or a municipality that owns that strip of ground. And when you start collaborating with the upstream people or the more upland people from the watershed, it really brings in a dynamic, because some people don't understand each other. Sometimes they don't hear what's going on at the waterfront versus what we're doing upstream, so you see a lot of different variables there bringing in that collaboration. Obviously, the education goes, but as you said that diversity to the group of streamside vs. upland really helps folks that come to the table, as well as everybody else's comments about the regulatory community, whether it be municipal, cooperate or a homeowner. it really matters and makes a difference and then in my world, you factor in the ag folks versus the forestry folks versus the urban setting and it's all part of the watershed, so it really makes a collaborative discussion. It can be successful, it's a strength in general and sometimes it's a weakness or we perceive it as a weakness but it definitely opens up the conversation."

Watershed groups need to play a role in making connections and building local networks. Organizing multiple partners within a watershed group can be very challenging. There may be competition between organizations, or an emphasis on one aspect or user group over another.

"I think the best work ends up being through networks. So if you have one solid entity that is intentional, networked by temperament. They're just nice people, and they're always welcoming everybody in, and they have a friend here and a friend there... I've always been impressed at the levels of networking... between the brother-in-law who's related to so and so who happens, works at this municipality, and it becomes essentially a really rich group that isn't connected to each other. And your job is to inform them that they are connected... And you create a place for the connections to happen."

"We were trying to establish a group of individuals, municipalities, businesses, whoever, to actually become part of our [watershed group]... I'm sure you're going to hear that from every watershed group, that we all have that feeling of our county is the craziest, hardest one to deal with, and groups are at odds with one another within your county. I think every watershed group, anytime I go to meetings and listen to others talk about their challenges, we all have that commonality. But I don't know, [my] County is pretty high up there."

“Organizations that focus on one aspect or one use of the river and don’t necessarily embrace the mission of having the river be for everybody [are a barrier].”

“Trout fishermen don’t like paddlers because they feel they interrupt their, they scare the fish. But technically, if you’re a good trout fisherman you should be on the river early in the morning and in the evening when the paddlers aren’t there. And once again, our view is that the river is for everybody... Some of the worst offenders are people who own riverfront property and cut all of the trees down so that they can see it. Bad idea.”

“One of the things that we wrestle with... is the multiple uses of the river. I mean, if you want to engage the broad spectrum of stakeholders, you need to engage all the stakeholders and... that includes voters and that includes people who fish. And they're huge. I mean, they are just huge, and actually we've just seen in the last year and two years, the boaters tank a whole bunch of ideas about water quality and this kind of thing that, you know, but the boating community, you know, really should be on our team...”

A focus group participant described the challenges of coordinating with other regional entities on other watershed-scale groups and projects. Even if groups are working at the watershed scale, they may not be thinking comprehensively, and they could miss opportunities when resources are being devoted to only one specific topic.

“[T]hey have a watershed plan that is not necessarily the same as the watershed plan the [watershed] has. And it took a few years before we finally got them to the table to say, let's work together. We have the same end goal, but their focus is totally on something different than like what we look. They're looking at a watershed plan that focuses on... ag operations and how we can deal with that and, how it impacts our watersheds... And so we lost an opportunity to do a much more comprehensive look at the stream and what's going on with it.”

Engaging community members in watershed work

Watershed groups need a larger constituency to support watershed work, and need more people to be engaged. This can be a challenge when communities have other priorities, and where watershed-scale organizing is less familiar.

“It would just help make a stronger case for improving water quality. I think the watershed group in itself, when we help municipalities apply for funding for these kinds of projects, is great, and having a letter of recommendation from us is important. But having a larger constituency behind that letter of support, I think it just has a lot more weight and it shows the funders that there’s a lot more stakeholders at risk or who are concerned than they may have thought about in the first place. But also, not even in terms of projects or funding, just having a stronger group – community building. Having the watershed group be less of something that’s getting projects done, but also just a place for people to come and express their happiness or their displeasure with what’s going on in terms of water quality issues. And having those people feel more comfortable recreating, feeling better at ease with their drinking water, those kinds of

issues... Working with farmers, getting the agricultural community more involved. But also getting community business organizations, whether it be Chamber of Commerce or if there's more local business groups. We want to make sure that their concerns are being met as well. Also reaching out to sportsmen's groups, whether it's Trout Unlimited, fishing clubs, any of those kinds of things that rely on and care about both water quality and habitat."

"We would need the buy-in from the community that this is an important initiative. We've kind of heard anecdotally, we were out on the site where we were thinking of an urban farm and someone asked what we were doing and we told her. She said, 'Well, there are other big issues here, why do you want an urban farm?' So we really need the buy-in and support that this is worth peoples' times as much as addressing other things like housing security and food insecurity. I think if we have that, we can do a lot."

"And now we're really close to [an area with a significant water quality challenge], those are issues that have brought it a little closer to home, but people still don't really focus on clean water."

"I think I can do a good job building students into this work and having students play a central role, but I just don't know how to get stakeholders involved or so they care about the work. I do it sort of passively at this point, like here's the reports, I'll share data. Every once in a while, I'll say, 'Hey stormwater coordinator, here's this data that I'm collecting, are you interested in it?' ...But I'm really sort of jealous of the Lower Hudson watershed community groups, where they have lots of energy surrounding their watersheds, people really identify with their watershed. I just don't know how to do that up here. And I don't know if it's me, I don't know if it's because I don't have the right approach in terms of how I reach out to the community and try to build some support for these collaborative projects, or if it's just lack of time. So maybe if I just spent more time and didn't just email once or twice, but called or tried to set up meetings. So, I don't know if it's a capacity issue or if there's simply something different about the capital region -- and there's not a history of watershed groups."

Watershed groups are also concerned about engaging people in environmental justice areas and traditionally under-represented communities.

"And then making sure that we are able to tap into the underserved communities that are within our watershed. I mean, [municipality] is an environmental justice area, so we want to make sure that we are able to connect with the communities that we want there."

"And I think there's a language barrier, because there's a large population of Hispanic people in the neighborhoods where we work. We try to translate materials, but we don't have anyone Spanish-speaking at our events to engage with people. I'd like to understand how they use the spaces along the [stream]. So maybe it's a cultural or a language barrier there that we want to overcome. I think some demographic factors may be barriers as well to engaging the community. People might not be as able to spend time attending meetings with us or going to events or they don't know who we are."

A focus group participant that is also part of a watershed group expressed the desire to engage community residents, in addition to organizations.

"We're always trying to engage more community members... In my situation, we have a lot of local organizations that have representatives that are involved [in the watershed group], but like as far as like the people that live next to the creek... [they] are not the ones coming to the meetings, and maybe there's a different way we should be thinking about it. Like maybe they don't need to come to meetings. Maybe there needs to be another way to engage them, but anyway, I think having engaged community residents is something that for us is a need."

Watershed groups may need to focus more on the social aspects of community-building, and build these skills. Focus group participant:

"I think that what they do well is a lot of the bringing ecology to management. And what we need to do more of is the social side of things, which is really, really hard and really requires that you have people in the community who want to do this. Because as an outsider, I can't do that."

For watershed groups that mostly work with municipalities, it can be challenging to connect directly with community members.

"I think we've got a really good handle on like our highway departments and that kind of stuff. I think more the public. And it could just be because I don't focus on it. So, you could talk to someone tomorrow and be like, look, all these awesome things we do for public education in the [watershed] and I don't know anything about them. And that's totally fine, too. But I think just more of the public education, because that's not generally what we focus on in our work."

"I guess just finding better ways to do public outreach for other stakeholders that might not always get included as well as we'd like to. Again, it being an intermunicipal council, our main audience is technically municipal officials, but we recognize that there's numerous other stakeholders in the watershed, and I think one of our weaknesses and what could make us more successful in that realm would be finding ways to improve those connections and outreach."

Limited capacity and staff turnover at community organizations can make it difficult to develop and sustain partnerships.

"I guess in a way, an obstacle that we are having is how do we really just display it in a way for people to care and organizations that are already overwhelmed with work to care and that this is not really on their top 20 to do list, to participate in."

"...[W]e were working with the [municipality] initially, and so there seemed to be some effort there... But the main contact there, she left for another position. And also, we were working with a community group... and that relationship sort of fizzled out as well. They got a new president, the person who I was working with left the organization. So, it seemed like there was some good momentum there but due to staff changes, we lost that momentum as well."

People are increasingly separated from nature, and this can make engagement more challenging.

"I don't know how that's happening; it's complex. Because people are not going out into nature much anyway. We're so separate from nature. Everything is about what serves our purpose. Instead of that, you know, we are part of it. Hello?! We are part of nature. So weird."

Watershed groups also expressed the need to connect more effectively with farmers (focus group participant), school districts, land trusts, businesses, property-owners (focus group participant), and private homeowners. There are communication challenges related to working with each of these groups.

"The struggle that I'm hearing about is that [farmers] understand the BMPs that the soil and water conservation districts have created, such as making sure that animals aren't wading in the streams or making sure that there are buffers between agricultural operations and tributaries, when to properly apply fertilizer, and those sorts of activities. And, you know, we're not able to, at least in my experience, a way to communicate to those farmers and large landowners who see their farm operations as following the letter of the law. So how dare we [watershed groups] come to them and communicate that they're not doing good enough? So I think that's one of the most significant challenges."

"Yeah, I think the school district has been a barrier. I hate saying that, but I think the school district has limitations and its own set of problems and it's been difficult for us to communicate to them and we really would like their involvement in the plan. So, there's just been a barrier in communication there."

"Working with land conservancies to do conservation prioritizing, which indirectly means the [watershed group] reaching out to land conservancies is helping the watershed groups because it strengthens them as a partner."

"And of course, you have to handle that stuff delicately, because you're not going to get where you want to go if you go out and start lambasting all the businesses in the [municipality] for not enforcing their code. But we tried to do that as proactively as we could, you know, having clean ups... and then sending dumpster management information to some of the businesses and stuff... And when I was talking about it with the common council, he got up and he said, 'We all tried to work with the businesses in a friendly fashion, and those that didn't respond,' he said, 'we issued them citations and they are putting their dumpsters in enclosures now.' So anyway, to get the finish line, right. I mean if we got to shame you into it... It would've been better if it had happened just because of education efforts, but that's not always going to get the results you want."

"We were able to find a pretty good solution for other condominium complexes to use, and that's like this new kind of zero percent phosphorus effluent producing sewer package plan and a container that can be lifted up and brought in and hook it up. So, we did it as a pilot project..."

we found out that this would be great... This is 25-50% more expensive than other solutions so we thought well this is easy, we could just try to get funding for this, and there's so much funding out there, but then it's just an endless job of trying to convince people that if you're going to fix an existing problem you could fix it this way and this would have positive impacts on the entire watershed. And I think that the answer is to education but it's also to recognize regulation and also to play into support across political boundary solutions and to figure out how to support all of that and keep new community leaders who... are like private business owner who just decided to get involved with their community."

"Private homeowners [are a barrier], people who buy private parcels and don't want anybody else on the river."

Lack of trust

It can be challenging for watershed groups to build relationships within communities due to trauma, anger, and mistrust. Well-intentioned groups may not understand these complexities, and may come in with a savior mentality that can be harmful.

"...most of us involved with the [watershed group] are also involved with all kinds of other community affairs. And it's very, very complicated community to work in, cause there is a lot of trauma and anger and mistrust. And the nonprofits are not always the good guys. Just because you think you're trying to help, doesn't mean that you're actually seeing the full picture and helping everyone. Even if you are doing really good things, it doesn't mean that people are going to receive it that way. One of the things that makes it very hard in [this community], and that it's notorious for, is that it can be a really cruel environment and people don't want to see you succeed. Cause there's a poverty mentality around everything, including visibility, including forward momentum. You know, who gets to be the one who makes a step forward. We had a real sense of needing to be very, very sensitive and delicate about the way that we work, operating in the community, to not come in with this attitude, with a savior attitude. To not come in and to be one more group that's kind of declaring itself more knowledgeable or more legitimate."

"There are some local groups that are not willing to work with us, so there's personal politics that occur."

Communicating about sensitive watershed issues can be difficult when people in the community are not interested in knowing. Being intentional makes the work slow, but it is important to build trust.

"There are all kinds of reason why people don't know and don't want to know. That's always the challenge, is how do you, first of all, get people to even know that this is even going on, and then get them to care that's it going on... That's also from knowing, we already had to deal with a number of trolls early on. Again, things in [this community] are very, very sensitive, and it's very easy to make a misstep and offend someone. Even though that has nothing to do with your

intention. So doing things with a huge amount of intentionality is something that is extremely important to us and that in some ways may have slowed us down, but in other ways I think it's proving to be very successful."

Environmental issues have been increasingly politicized, which can also impact watershed work. Interview and focus group participant:

"Then I'm hearing crazy things like it's because we are a Republican community. The Democrats don't give us money. I'm like oh god, there's, like, a theory to everything."

"It's even harder now because you know, we've politicized conservation and environmental issues so it's now seen as a left issue, rather than as a health issue, and that I think is making it even worse when people look at their yard signs to decide whether they can talk to their neighbors or not."

Regulations and Policy

"So it goes back to, if you want to make change, I think you have to go all through levels of government to do that."

Municipal boundaries and home rule

"That home rule concern is a big one."

Different laws in different municipalities can make it challenging to work across the watershed. It's hard for municipalities to think about governance at a watershed scale. Two focus group participants:

"[H]ome rule... [S]o many of our boundaries are the political boundaries, not the watershed boundaries... [I]t's when you have so many municipalities, the vast majority of them are parts of multiple watersheds, so what do they do? They can, but they don't want to have three different sets of rules in their town based on all of these different watershed variables and perspectives, and they want to administer one thing, so now they don't know what to do. So, when you start getting down to the subwatershed level, it gets a bit tricky. And then you get up to the larger scale, and it's like they just throw up their hands and say well that's a state problem or that's a county problem or that's somebody else's problems. So that's why home rule is good, but it also shoots us in the foot a lot of times, you know, when we're trying to get things done. So administratively it becomes a barrier and that's where I see a lot of watershed groups... Bringing them together just makes a difficult situation, and then that becomes the barrier, and how do you cross that finish line with so many different goals and getting everyone on the same page."

"Planning is great when it's at the watershed level, but the watershed doesn't administer the political boundary and the political boundary doesn't care about the watershed, they care about

what's going on in their entire town, whether it be an MS4 or a non-MS4 to plug them into at the end of the day."

Several watershed groups spoke to the challenge of managing drinking water supplies outside of municipal boundaries, both surface water and groundwater. This can be a particular challenge when municipalities have socioeconomic differences.

"One of the things that we're really looking for a way to start to shift is access to control of our own watershed. And we're up against home rule. This is the biggest thing. I mean if the [municipality] could actually create its own rules, for what happens and what doesn't in its watershed, we would be in a very different position... we wouldn't just be the victim here, fighting and being angry."

"We want to protect our wellheads. We've been trying with the [municipality], for years, to get wetland protection in place. There is some language, but it needs to be improved upon. And there's nothing for wellhead protection. They keep telling us we're gonna work on it, but they're not working on it. Nothing's been happening. And we are very concerned."

While New York City Department of Environmental Protection has a unique ability to manage their drinking water supplies within the Hudson River watershed, it can also be challenging for watershed groups to work with them.

"[T]he last thing you want to do is get involved in a project that costs them money, budget money. If we find enough in that project that they should be interested in, I mean we're going to definitely keep them involved, and they may get involved more than they want to..."

A focus group described potential challenges of managing source water and enacting regulations at a watershed rather than municipal scale, and shared an example from outside the Hudson River watershed. It can be difficult to build collaborations when only a small part of a county or a town is within the watershed, but still subject to its regulations.

"If you really were to go through the entire watershed, so that the watershed rules and regulations are watershed-based, right, but these groups are not watershed based necessarily, although the watershed group itself is the only one that is actually also watershed-based. The other ones are not, so like Ag and Markets through soil and water conservation districts, they're not watershed-based, they're county. ...[One] County Soil and Water is like pretty well engaged and they feel heard, but... [t]he watershed goes into [another] County, and [this other] County Soil and Water is like, nobody ever came to talk to us. And suddenly, we're going to have watershed rules and regulations that apply to you know, granted, it's a smaller part of the county, but like we have land owners that... suddenly they're going to be... subject to the watershed rules and regulations that originate from [that source waterbody] ... [That] County Soil and Water was not brought in at the ground floor of that conversation. So, that's one of the reasons why these things may not actually go forward. So I just think for watershed groups there's a role for advocacy, I get that, and you may view soil and water as like being maybe on

the other side of the fence on this, but there probably are... in terms of a neutral partner who will help you understand the ag side of things, that's probably your best bet. And I would talk to them about it right from the beginning. All of the soil and water districts that even touch on your watershed, from whatever county that is."

State Regulations

Several watershed groups noted that NYS DEC regulations are inadequate for erosion and sediment control at construction sites, especially for watersheds with silty soils. A lack of enforcement of construction site runoff requirements is also a challenge.

"We wrote letters to DEC regarding the sediment going into the [stream]. But I will admit, I couched it in terms of, 'Hey, the erosion and sediment control guidelines,' it's called the Blue Book, 'are not adequate for silty soils.' And they, the typical response to the need for erosion and sediment control is, 'Oh well, just follow the Blue Book!' Well, there's tiers of management practices in the Blue Book. Some are lousy, some are good, but they all choose the cheap ones! ...So, it's, you know, it's just this side of useless. There are other means, there are other more expensive [options]... But, you know, you gotta make 'em do it. And that's, that's where the Blue Book is weak."

"...one of the biggest issues that continues to eat at me is that for all watersheds, especially in our area with all the active construction that's going on, is the construction site runoff. I just did the four-hour course for contractors the other day, and I've got people that are taking this thing for the third and fourth time now – they have to take it every three years – and yet every time I go for a ride, I see silt fence that's not installed properly. So, my takeaway from that is that that does not have enough importance. It's trumped by economic concerns. I mean, all of us in this field struggle with that, but until that takes equal standing with economic health, then you know, you start to feel like you're beating your head against the wall. I mean, they can put all the practices in according to the standards in the book, and you're still going to have silty runoff coming off of these sites. But if you're not even putting the most basic practices in correct, then I don't know where you go from there. And there's no enforcement – there's very weak enforcement staff in Southeast New York, the DEC, I don't know what the heck's going on with towns. I mean most of the towns in [this] County are MS4, so they have the primary responsibility for that... And I kept saying over and over during the course that you, as contractors, need to interact with the engineers and the inspectors and if something's not working right, the contractor shouldn't be making up what he's going to do to fix it, you know. I mean, that's what these guys are getting paid the big bucks for, they're supposed to come up with the practice and the contractor has to implement it. And [a municipal code enforcement officer] made a really practical point to me that reinforces what I just said. They'll go out there and everybody agrees that it's not working... [The code enforcement officer is] like, fix it, and the contractor's like, I'm not fixing it until the engineer tells me what to do. Well, the engineer has no urgency, it could be weeks before he comes up with what he says you should do to fix it, and meanwhile the silt continues to run into the stream, you know? And if that site was

hemorrhaging money, you can bet that everybody and his brother would be there to stop the hemorrhage, but if it's hemorrhaging soil, then, oh well."

New York State stormwater regulations are based on rate, rather than volume, including guidelines for Stormwater Pollution Prevention Plans (SWPPPs).

"For example, on stormwater volume. When I was on the planning board, I worked with the town supervisor and we put in a local law that says basically, don't flood out your neighbor. That the volume of stormwater coming off your site post development should not be any more than it was pre-development... So, we put that law in place... and realized we had a flaw in the law. Because as much as in the goals it said follows exact things, don't increase your volume of stormwater runoff. But in implementation, it said go to the New York State SWPPP guidelines, and the SWPPP guideline does nothing to control overall volume of runoff. They only control the rate, and all a developer has to do is make sure the rate is less... we fought that one with [a developer] for months and finally in a meeting, they said, well you're just wrong. In spite of that being a goal and in spite of professional engineers recognizing it would cause flooding, they all hid behind state regulations, rather than protecting the residents... So I see a deficiency in actually the state laws. I was just asking, from the EPA... are you familiar with any laws around where they control overall runoff volume? He said, unfortunately, no. Because we are looking for an existing law that we can then say, oh, this other community did it. Let's put in that language to do that. So, within this year, we certainly will be hoping to draft language into our law to get that done."

Watershed groups are concerned about a lack of oversight from NYS DEC to review State Pollutant Discharge Elimination System (SPDES) wastewater permits and failing infrastructure. Wastewater infrastructure is failing and enforcement is lacking. Interview participant and focus group participant:

"There on the [old] sewage plant people are having a little problem. We originally got a lot of stuff when the original hearings took place, the DEC was gonna be really careful about the sewage treatment plant, they were going to be very careful about this and that and the other thing. And that seems to have turned by the wayside. Partly it's because the people administering the actual SPDES program haven't a clue, didn't bother to read the file, they just have to check off the stuff and sign it. Move the paper on their desk. I feel badly about that. It has to do New York State politics and the DEC, unfortunately."

"Just a case in point, we've been working with a fraction of the 20 sewer treatment facilities that go up and down [the] watershed and some of the things that we've seen at some of the 65-70 year old package sewer plants is – ...we had a Canadian consultant look at it, and when he saw one of them, he said somebody would get handcuffed and taken away in Canada if this was going on there, and this is just incredible."

Incorrect regulatory maps related to stream and wetland classification are a challenge.

“The classification issues, of is this a class C body of water, class A body of water, whatever, to get that corrected. Certain maps... Correcting that, or reexamining that. The connectivity issues, how things move about, how roads and tunnels and all those other sorts of things interfere with what is natural.”

An additional challenge is a lack of regulatory water quality standards for emerging contaminants, including PFAS chemicals.

Lack of enforcement

In addition to lack of enforcement by state agencies, a lack of enforcement of environmental violations by municipalities is also a challenge. Watershed groups cited examples including filling streams and wetlands, stormwater prevention plans, and MS4.

“[Local enforcement] is terrible. It’s horrendous... So that is very frustrating to us, that we have to challenge each of these things, and the local building inspectors don’t see the issues, and they’re pretty obvious.”

“And what you’re seeing is virtually all of them have no control on stormwater. Whatever... plans are in place are not enforced... For example, for the entire town there was only one inspection done last year. One of the biggest issues we have and actually talk about at the [watershed group] – and we do have a new administration in – Is the need to improve MS4 and also SWPPP preparation. One of the biggest deficiencies there is in the town.”

Unclear jurisdiction

It can be challenging to understand which agencies and entities have jurisdiction over managing rivers and streams. Watershed groups were unclear where to go when there were problems, and found it difficult to find the right contacts within agencies to help.

“So that creates a lot of different issues when it comes to management, it creates issues with jurisdiction, because there are overlapping jurisdictions... DOT manages all the safety issues around the parkway in the south area, the south section of the river. We have... a really popular trail, we have [County] Parks jurisdiction, of course DEC. Some sections of the river are Class A, so we have DEC involved as well, so there are just overlapping jurisdictions that sometimes make some of the work challenging... And then at the same time, for instance for different limitations for DEC, we can’t go into the river at certain points. I am not very familiar with that, but when I first started, I was told, yeah, because it’s a Class A stream, we can’t have our youth program, for instance, just go into the river and work there. So in the areas where you have the vine problem along the banks, we need to go into the river to do it, that’s... because they think the sediments, yeah... Often times [volunteers] are like, ‘When are we doing this, when are we doing this, when are we doing this?’ And I am like, ‘I am sorry, but I can’t get an answer from DOT to expand our Adopt a Highway permit,’ right. I can get it from them, but last minute, [a county

agency] will stop me because it is 33 feet from their center line, and we are going to walk through there, so they want us to sign a contract with them. So, there's multiple jurisdictions and that can sometimes create some challenges."

"One of the things in [a particular county] is that we have various agencies that have certain jurisdictions over different aspects of the creek. Another problem is understanding how all that works. One time, there was a dead deer in the creek. I started trying to find who has responsibility for that, so I called up the Health Department. 'No, you gotta call them,' they had me with DEC. 'No, you have to go to the Department of Transportation, because it is near the road.' Eventually, the commercial owner a couple of days later ended up pulling the deer out of the creek because it stunk. [laughter] Who has jurisdiction over the creek? That's a problem from our understanding, who to go to when we have a problem with the creek."

"We had somebody from [a county agency] come by and talk to us about what someone who owns a house – they're our group, they own a house on the creek. They want to know what they can do through the embankment to protect their property from falling into the creek. They couldn't find out locally from the [municipality]. So they finally had somebody come in from [the county]. He was very nice, he said, 'Well, you get a licensed engineer and they'll tell you what to do.' They didn't seem to have a one size fits all answer for what to do or what you are allowed to do because it is a waterway. You don't want to do anything where the DEC is going to come after you and say, 'You've done this wrong.' Now you've spent \$30,000 and you have to take it down. So, that's a problem is, 'How can you manipulate the creek?' You also have to think of the flooding downstream. If you do something up here, how is it going to affect your neighbor downstream? So, that has been a problem. Who has jurisdiction over what you can do?"

Advocacy role of watershed groups

Watershed groups expressed the need to have state-level decision-makers take watershed issues more seriously to move their goals forward. There is a need for lobbying and making sure their voices are heard.

"But now, I am thinking we need to have the people who are, I don't know, paid to be our representatives in government. We need to have them take the issue more seriously, and I guess the combined effort of the different watersheds. But, there are people, like for instance Jeremy Cherson at Riverkeeper, he's up there in Albany and he's the person who is waving the flag for the watershed and the river. But we need more local representation, we need maybe a representative from the local watersheds. Even if it's southern, middle or upper New York, we need somebody to represent us."

"We need a lobbyist, a paid lobbyist [laughter] because that's what you're going up against. As engineers, we're trained to deal with facts, but getting those facts across to a wider audience is sometimes difficult because that's not part of our natural training. It should be, but unfortunately it's not, so you need people who help tell the story."

While some watershed groups are interested in advocacy, others have decided not to play this role. Individual watershed group members may not be able to engage with advocacy, especially if they are government employees.

“And that was another challenge of the group, is we agreed we did not want to be an activist organization. We could as individuals, of course, be activists. But just not as representatives of the organization. We wanted the organization to be a place where information could be collected or shared. And that was a real tension. Some people felt very strongly about that. Some people didn't care. I don't know.”

“But also... being a government employee, I have to be particular and how I articulate is not my viewpoints as well, and I have to remain neutral on a lot of things. And some people might want to get political with things, and I just can't, it's part of my job. So those can be potential barriers. I would love for us to do advocacy but I have to be careful with that as well, and then you know funding streams, down the line.”

Watershed groups may not be sure of their best advocacy role. They need a better understanding of what advocacy means and how to be effective advocates. It can be challenging to identify the right approach to advocacy, especially when agency or nonprofit partners can't or don't pay this role. Advocacy is also limited by funding from state grants. Three focus group participants:

“...something that some groups are very challenged by in frustrating ways, and some are not, is just being advocates and knowing that they can go and talk to their town board or that it's helpful when they do that. And they're not understanding what advocacy is, or different forms of it, so that they're not afraid of the word, and that they just advocate for their creek is really, really, really helpful.”

“Yeah, sometimes [watershed groups go to Albany for lobby days and do that kind of advocacy]... but some are very unwilling to think of themselves in, you know – I think that one thing we try and do is talk about, like, civics versus advocacy, because people are more comfortable with that... [T]he state grant – It's another problem with state funding... they feel very restricted if they have if their livelihood depending on money from the state, because that restricts how you can advocate and what you can say and what you're comfortable saying... I think it's uneven... both our effort in sort of engaging people in that, and being sophisticated and smart about it. We fail all the time in making use of our partners in the ways we could, and also in their willingness and sophistication and being able to know the problem and be able to speak out effectively.”

“I just think some people are just uncomfortable because they think of advocacy, sometimes as like confrontation. And has there been or have you had trainings on how to be an effective advocate that would help them like get over that hurdle? ...[E]specially if they work with nonprofits like ours, where we have to say we can't be an advocate, but you can be an advocate, but we can't be an advocate. There's some confusion with that, but I think some people do fall

back on that because they're not necessarily comfortable with confrontation and if they had just a few handholds or some help understanding that it doesn't have to be where you're screaming at a platform..."

Strengths

Background

To better understand the strengths, assets, and accomplishments of watershed groups, we asked interviewees about their groups' strengths, defined as aspects of the group that enables it to achieve its goals. We asked individual participants:

- What is something you are proud of?
- What are your accomplishments?
- What are your group's strengths?

We asked focus group participants:

- What are watershed group strengths?
- What are they good at?

Watershed groups vary greatly in their size, structure, and capacity. In many cases, the strengths of one watershed group may be an area where another is weak. These strengths described here are all relevant for at least one group that participated in the project. They also highlight the potential for these strengths in other groups in the future.

During the interviews, watershed group members discussed many different aspects that helped strengthen their groups, including their members and partners, networks, technical skills, group organization, funding, and even their watershed conditions. Interview participants also discussed watershed group roles of communication, programs, and planning as strengths. Focus group participants focused more on the strengths of watershed group roles in the region, including advocacy, education, communication, inspiration, getting the work done, and sharing local knowledge.

Watershed Group Members

Passion and expertise

One of the most cited strengths of watershed groups are their people. Watershed groups pull together people with expertise and experience to work together on a common goal. Watershed group members include volunteers and professionals from a variety of backgrounds. While many members have expertise on water quality and watershed management, their skills and knowledge are not limited to those areas. One watershed group leader noted that they are most proud of the quality of the people that have been attracted to join the group.

"The quality of the people that we've attracted to the group. They really feel devoted to protecting and doing things to protect the stream."

"There's just a tremendous amount going on for a very small organization. And I think that that's a reflection of the people that are involved, are very intelligent, they're very passionate."

"I had a great deal of talent in that group of people. I once heard somebody say they surrounded themselves with talented people and that's why they're successful, and I've tried to do the same thing. Because they really knew their stuff and they were very helpful to me, so that was a great strength."

"Their love of the [watershed]. They are so passionate about the water and the plants and the animals and, I mean, that's really fun to be around. And energy. Everybody there loves that creek, like deeply. And cares about it deeply."

Participants also highlighted the value of having people who are willing to work hard. Watershed groups value their hardworking, passionate volunteers, in particular.

"I know there's a lot of hard work to be done. But there are some really awesome people in our community willing to work hard."

"We've got workers. We've got people who believe in the work, care about the work, and want to do the work... When you get to the staff level, people work there because they care about what they're doing. And when they care about what they're doing, and they care about their homes, and they care about their watershed and their neighbors... we're all environmental people and we all recreate in our different ways, so water quality is really important to all of us. And we truly understand the need to protect it."

"Things are going well, as I think we have enthusiastic people... It's nice when people take the initiative and want to do it."

"Firstly, passion, a lot of volunteer hours go into watershed groups. And it's amazing that it's harnessed how people feel, and the affinity they have for water, and feel a connection to that place for them. You don't often find that outside of watershed groups."

"Technical competence, passion for the projects, a sense of moral responsibility for these projects, a sense of ...the environment we feel is critical to human health and human society in a functioning world. We feel that it's critically endangered in so many ways, and I'd like to think that most people feel that there's some niche in society in the world that they can contribute to in a positive way."

In terms of skills, watershed group members bring expertise in a variety of fields: water resources, but also accounting, arts, and media, to name a few. Watershed group members also bring their networks to the group, which can be leveraged for additional support and

opportunities. For example, watershed group members that work at educational institutions and can help find student volunteers, make connections with youth, and so on. One group noted that one member's background resulted in making sure there are always children's activities at events to make their programs more inclusive. Some watershed group members are used to working with a shoestring budget and bring that strength to the group.

Strengths may also be personality traits that are an asset to the group. Volunteers also bring in local knowledge, along with their expertise. Watershed group members that are professionals can also bring in their other work projects, which might be related to watershed management and of interest to other members.

Part of the value of the watershed group structure is bringing together passionate people with these diverse skill sets to work together on shared goals. Watershed group members highlighted the value of having these different people together to help learn from each other, and help the group be well-rounded. In addition to technical skills, this also includes volunteers and people from different communities with different strengths, which can also support intermunicipal sharing and coordination.

"It's a group I really look forward to working with because everyone's really enthusiastic and also really knowledgeable in their field and we have the more technical experts..., we have education experts, we have an engineer and then kind of the planning perspective. It's a well-rounded group, which is a strength... And everyone's really willing to pitch in and spend their time on behalf of our group."

"I think we're quite fortunate in the fact we have a quite diverse group of backgrounds, none of which is marvelously outstanding, but all that is very practical. We have teachers and educators, we have volunteers who just love the habitat and who will be happy to lead walks and talk to people, on their level. We have a few PhDs, and access sometimes to more of them. We have some business people, and we just have some people. And we have some artists."

"We also have community members involved, ...so they bring some different expertise too, to what's going on in their town that might be more environmentally conscious or not, and then that allows for more ideas to be shared as well."

Diverse members bring in different perspectives and different strengths. Community members both from inside and outside the watershed are involved, and include members with technical backgrounds, the arts, and connections with youth.

"I think right now we have a great diversity of members in the group... I am very grateful to have the arts represented in our group in a business sense, as well as a nonprofit sense, and just flowing throughout everything that we do. I mean at the last meeting, it started with a really beautiful reflection exercise, which I never would have thought to do. So, it's that I'm very grateful for, and I see that as a huge strength that we have. We also have community members involved, those that reside within the village and town boundaries as well as those that don't, so

they bring some different expertise, too, to what's going on in their town that might be more environmentally conscious or not, and then that allows for more ideas to be shared as well. Then we also have those with our technical backgrounds, so that would be more of our soil district, and then we have a youth voice, too... which I think is extremely powerful. It all goes back to empowerment I think in the end, and having that youth voice there showing that there is a positive way for change in the future, grateful to have as well. And then of course our village is super helpful and County Planning is going to be a great resource. I'm very happy to have that at the table."

One focus group participant highlighted the value of the watershed group structure to bring talented and passionate people together. This person shared several examples of individuals that were able to be more successful advocates or researchers because of their connection with a watershed group. The watershed group structure provides a platform for their work to be communicated with more impact and make new connections. Groups that are welcoming and fun are better "people-collectors" and more successful. The group structure provides a conduit for people to get involved.

"I feel like watershed groups, and sometimes just the projects themselves, are just people-collectors. And they're just ways to find those individuals that are- there's no other way to do it. ...[A researcher] comes out of the woodwork and is this... expert, and we didn't know she was there, but now she's working in all these places, because she was collected and gathered up by the watershed effort. So, I think it's a really important role... There's sort of like a personality to different groups, and if your personality is welcoming and it's fun and, you know gets things done, or whatever those qualities that attract people, they're more successful."

Another strength of watershed groups are people who are interested in learning new things and taking advantage of learning opportunities:

"I guess other strengths are maybe I'm adaptable, or a jack-of-all-trades kind of thing... I do sort of feel like I taught myself a lot about water quality and how to do water quality monitoring projects in watersheds... I guess another strength is that I really enjoy learning new things, ...it gets me excited."

"People who step up for that position usually have those kinds of [leadership] qualities, but I think we've tried to do some-- within the watershed group-- we've tried to do some development as well for our leadership. We've been getting them involved and offered public opportunities that they might not have gotten involved in without being part of the group. Going to conferences that they might not have gone to, so, yeah, there's been a lot of professional development that a lot of our leadership has taken advantage of."

"I'm pretty good at teaching myself things. So, if there's something that I don't know, I can admit that I don't know it and I'm pretty good at researching it and figuring it out."

"What's amazing is that I was a lay person, and all of my knowledge has come from conversations with people who have dived in or are local professionals in the various agencies I had mentioned before. I attend various conferences, and those can be very helpful to gaining knowledge, so that I feel like I have some understanding, though it's not book learning, I have some understanding of the considerations. And so, I would say that those resources are enormously helpful and the professionals are incredibly generous with their time, you included."

"...I think that that is something that allowed me to feel empowered to be engaged without having the professional background... It was intimidating, and you have these important people from the government, the scientists, and the head of whatever department. That's really how I started to get involved. It was a combination of feeling like we're not asking the right questions. And wanting to be close to the people who were coming around."

One interview participant spoke of the value of having a particular volunteer with professional expertise but is retired and willing to devote many hours to watershed projects.

"We have one... who is just, he's retired but he's like the uber-volunteer, just a superstar, because he volunteers for – he spent hundreds of hours probably on [an education project] and, just did it all on his own, found things online, and is helping with the construction and finding the Boy Scouts to help... So that's a big one."

People who are well connected in their communities contribute to watershed group success. Being a community-oriented person helps build relationships and living in the region for a long time also helps build relationships and local knowledge about the watershed.

"If you knew me well, you'd know that I just walk out and say hello to people. I'm a community person, it's in my genes. But I've been here a long time, and so I just know a lot of people. And then when things come up, maybe if I don't know people connected to that, then yeah, you have to develop that so you talk. You talk to people."

"The people who tend to want to be involved with the watershed, tend to be involved in other things. The first person I worked closely with in the [watershed] is... on the [town] CAC. She's close to the [town] supervisor. So working with her on the [watershed], she put us in touch with [the municipality]. And that remains one of our best relationships, so with the right people in the watershed group, you start to form these relationships with the town. I can think of three or four other names and ways in which they've, the watershed gives them a way to work their way into towns."

"...[O]f course that was near and dear to me, because that was my watershed address. And I know the watershed like the back of my hand and I was very familiar with it after living there."

"I think that my style is very much, trying to cut to the chase. And I can get to that because I've been at things for so many years and I've done many different things, all of which fold well into running a small nonprofit. It can be very entrepreneurial and I've done entrepreneurial things,

I've done government things, I've done nonprofit. I've done solar panel systems, so it all feeds in and I think being focused – what are our priorities – and just trying to remain focused on them.”

Diverse skills that contribute to the strength of a watershed group include outreach and marketing experience, corporate work, organizational and planning skills, community engagement experience, and strong communication skills.

“My former background, I had a lot of experience in outreach and marketing kind of stuff, and when you're starting up a watershed group you are doing outreach and you are marketing your product, or you're trying to raise awareness about a particular topic like watershed. So, I was really familiar with, how do you start getting people excited about, “What's this thing watershed? I keep seeing these signs, I keep seeing something in the newspaper about some watershed.” So that part was easy for me, as far as spreading the word and raising awareness.”

“Personally, I like structure, I think everyone knows that I'm a very type A person, so I like to have, pre-planning, I think, is awesome. Not everyone in the group thinks that way, which is a huge benefit. I'm learning to kind of go with the flow more, which is good for me and good for the group...”

“The level of skill of the people, the resources... you just have a whole range of skills. Skill sets that I think is, it's not so much what they succeeded at, but I think that's something to note. They know a lot about the water. They're not in the dark about it. And they bring different concerns to the table based on their knowledge.”

“We're a pretty sophisticated group as far as knowledge is concerned, we're very lucky, we have scientists, we have landscape designers, we have people who run their own 501(c)(3)'s. Education is a big plus, and then we have a superintendent of a golf course who deals with the environment all the time... We have [one member] who's been dealing with this for quite some time. I call her the great communicator.”

“So, I was able to create two brand new citizen science programs which we now call community science because of the sensitivity of the “citizen.” But it's still the same concept of getting people involved in scientific research and I am of the mind, having studied citizen science closely as I did, writing my thesis, that it's not about crowdsourcing data. It's not just getting volunteers to go out and collect numbers that scientists use, and just treating them as collection vehicles. I am of the mind that citizen science, community science, is at its most powerful when it's more akin to the social science side of, and the social justice communities' use of... participatory access resource.”

Working well together

In addition to the strengths that individuals bring, watershed groups whose members work well together are also strong. They are able to share leadership and responsibilities in a creative

way, and often genuinely enjoy each other's company. Having a group that enjoys and looks forward to getting together is a real strength that can help groups last.

"I don't think it would work well if we didn't have good personal relationships, so we do put an emphasis on that."

"I think our biggest strength is our commitment and our relationship with each other."

"...we understood... there's a real skill in collaboration. Collaborations are often excruciatingly difficult. Especially when its community members and you don't know each other. ...there's something about knowing how to let someone just use their strength."

"...[A]s far as the people that are the most active, I enjoy their company. And it's a range of experiences they've had in their lives, career-wise... It's such a nice mix... So, there's a little bit of a social life connected to it."

"Because we're a tiny, I mean we're scrappy, but we're still tiny and weak as an organization. So we tend to punch above our weight, repeatedly, which has been impressive. And I think that's due to the caliber of the people who are involved. It's been roughly the same crew..., so we work well together now. And our allies who have power... They can have that effect on other legislators and other organizations that they get involved, too."

The watershed group structure can also help raise the profile of issues. It's stronger to have a collective rather than an individual, and more enjoyable to have a group of people to work with.

"I find that the advantage of an alliance, an advantage of actually not just the alliance but the people you're involved with, is it gives more voice to getting things done than one person just screaming and yelling. We were on our own through a number of the projects... I'll tell you, it's a lot nicer to have people to work with and share their experience, which is very valuable. And I think we all supplement each other. You have people who are CPA administrators and environmental engineers and biologists and all sorts of skills."

"...it's like everyone is kind of on the same page who comes to the meetings. We had 20-something people yesterday that came, and it's just good. Everyone has something to add, everyone just feels that they get something out of it."

"The amount of members, the number of members. I think that's one thing that helps with the letters that we send, is that on our letterhead it has a list of all the members and it's over 30. So, that gives us more credibility."

"It's a good cohesive group. I don't think there's challenges. It's just something on everybody's time. Everybody is busy and to take the time to be able to do this, it's effort you have to put

forward. But I don't consider that a challenge because everyone is cooperative and working together."

Leadership

Some groups highlighted their leadership as a strength. This included individuals that have leadership skills, as well as group structures that allow for shared leadership, whether among board members or among other group members who are willing to do work as needed.

"Just the fact that we have a really great group of people interested in water quality in the watershed, and the fact that we've had some really strong leadership..."

"I think a watershed group can... be stronger if the reliance is less on one strong chair who has to do everything, including running the meetings. I think taking turns actually running meetings distributes that leadership so that if somebody leaves, or something happens, the group doesn't fold. It's got the backup just already built in, it's strong. That's why I like the idea of the leadership team."

"...as we set up different projects, we designate at least one if not two people as the coordinator of those projects. And those people, individuals have been super."

"[W]e have a couple of people who are good to, a couple of guys who would like to do the work... We have an architect on the board, we have a lawyer, technically, we have a great lawyer who has actually been advising us on conservation issues."

"The board of directors have worked really well, we've taken good people, they've proven to be helpful. Having a board, which I've had for two years now, has significantly improved the meetings, involvement, it's just been a very helpful thing."

Paid coordinator or staff support

While most watershed groups are volunteer-run, one key element of watershed group strength can be having a paid coordinator. Often a part-time role, or someone who is providing support as staff of a particular agency or organization, having someone in this role can help with accountability and covering key admin tasks. It also can help with legitimacy. Having a paid staff person or coordinator is also a strength for the groups that have someone in this role.

One interview participant highlighted the importance of having at least a part-time person to keep the group together, a role that this person has played.

"I think one of the things, not because I'm particularly gifted as an organizer, but having me there [part-time], paid has been key to keeping the group together..., and getting as much done

as we have, because there's somebody... to be there for whatever needs doing, just to make everyone else's work a little easier..."

It also helps to have the right person in this role. Another interview participant shared the value of having a paid coordinator who was skilled and knew the watershed well.

"She was not just paid. She was not just professional. She was excellent... She's got very good educational experience. She grew up in the watershed. She has a sense of humor."

Another interview participant that plays a coordination role as staff support shared that this has help sustain the group over time. This person felt that this role was not to lead the group, but to help motivate the leadership. They help get the group leaders to move, and make sure they have ideas in front of them.

A valuable aspect of having staff support is to help watershed groups and municipalities overcome a barrier of limited capacity. For one watershed group, having staff support means access to grant-writing support and administration/management through the grant's cycle.

"We spend a lot of time writing grants... at no charge... We write ourselves into the administration, because most of our little towns don't have someone on staff that knows how to manage a state grant... So, we don't just kind of like write the grant and say, hey, good luck. We follow it through to the end of the project."

Having staff and administrative support helps provide consistency, which is a strength to keep the group together over time. An interview participant who supports watershed groups on staff time said:

"... I haven't missed a meeting in 10 years, I just realized. It's not because I didn't want to, though there is certainly are days I didn't want to go... but... [watershed group members] told me that I'm the glue that holds them together just because I've always been involved."

Staff support play an important role in providing administration support. One interview participant described how important this was, and how they did not necessarily have the skills to do it well.

"Oh yeah [we have the resources needed for planning and organizing], cause we have [staff support]. I mean I would do it but she's so much better at it than I am. It's the thing I don't like the most."

Volunteers

Many watershed group activities require volunteers, who may or may not be watershed group members. The ability of watershed groups to leverage volunteers to get larger projects done (water quality monitoring, clean ups, tree planting, etc.) is a strength.

"When I did the stream study... my volunteers were awesome. They were Jenny on the spot, they were never late, they were willing and able and they were just a great group of people. They made it fun, we had family groups go out to take the samples. They never let me down once, and that to me was like, wow. And you do put values on their time for grants and stuff, you put values on everybody's time to go do something like that, and it can be thousands of dollars if you put a monetary value on it."

"The sampling program has only missed one or two... two or three samples in the entire four-year period due to people not showing up, or they were unable to find, or having a problem with the specifics. We have very regularly followed through in what we say we're going to do in regard to the sampling."

Municipalities

Some watershed groups include municipalities as members, particularly the three active intermunicipal councils. This is different from the watershed group collaborating with municipalities as two separate entities. The strength of this model is intermunicipal coordination on issues of shared concern, such as water departments collaborating and sharing information on existing challenges or emerging needs.

"If it wasn't for this organization, we would not have worked collaboratively together to address those issues. So [four different municipalities], we all had this same issue with turbidity with that one event... Collaboration is good. Understanding the Hudson River is good. I always say the Hudson River is evolving. And it's evolving for a lot of aspects. It's evolving due to climate change. It's evolving due to society. When I say society, it's evolving because of pharmaceuticals. We see a higher abundance of pharmaceuticals working their way into tributaries and estuaries, which is the Hudson River. So, I think it's important to have this organization as a council to start working and focusing and addressing all these issues."

"Knowledge. Yeah. I always want to use the [municipality] as an example. They are the leaders of the area. Great technical people. Huge infrastructure... We're covering small, medium, and large. So what may be needed at the large plant may not be needed at a small plant. But we're all dealing with the same issues. So that's what's working well, we get to experience everything. And at our monthly meetings we talk about what's happening at our treatment plants. And we've held regular meetings at every one of the treatment plants, as well. So everybody got to see what everybody's plant looks like."

"And then we try to work together once those observations have been made and how different communities may have had similar problems and then solved them. Or is working to solve them. So that we can share strategies, research, and different ideas on how things can improve in each community. And it's up to each representative to the [watershed group] to then be able to go back to their own town boards, village boards, and local groups, and say that we have discussed this problem. We can use some representatives from a neighboring community to be able to

reach out and find out how they solved their particular stormwater problem, or their particular wastewater treatment plant problem.”

Networks – Both Local and Regional

Watershed scale

Watershed groups provide a venue for networking at the watershed scale. A network is people that you know. Having a robust network means that you can get information and advice from others that are accessible. Lessons learned from one municipality can be shared with other municipalities (for improved SWPPPs in particular), especially helped by intermunicipal council structure. Lessons learned can be also shared amongst watershed groups across the region, presented on their work at another watershed group meeting.

Municipalities within the same watershed can learn from each other and working in a watershed framework can also help build momentum for implementation projects.

“I learned a lot from the Town of [name]... Actually, I applied it to the Town of [name] planning board... Hopefully as we refine those more, we can share that with the other communities in the watershed and even in the county and make them aware...”

“And we found that, especially when you're doing things like roadsides or culverts or things like that, when one municipality gets something in the county, the other ones are like, wait a minute, I want that, too! You know what I mean? So, then they'll come, they'll come around and kind of talk to us.”

One focus group member that actively participates in a watershed group shared the value of watershed groups in bringing people together locally who might not know or actively communicate with each other when they may not have had that opportunity before.

“...[I]t brings together people from a geographic area who wouldn't probably otherwise talk the same way, certainly not in a group setting. And that can lead to other things... One thing that keeps people coming back, including you know, notables who were elected and all, is that they get a chance to network with other people that they otherwise might not see or talk to.”

Regional

At a more regional scale, robust networks are also a strength for watershed groups. Connecting with other agencies, organizations, and watershed groups is essential to their work, and provides support. One watershed group shared that having a good rapport with surrounding watershed groups has helped get and share information.

Another emphasized that they would not exist without their strong network. By understanding individual or group strengths, groups can better identify opportunities for collaborative projects.

“[W]e are very much a coalition in a network. Even though we’re our own discrete organization, we don’t exist apart from our connections to the other – we don’t exist really, apart from our connection to [county] Planning, or to residents, particularly [in a particular town], or to [a regional nonprofit organization], or to Hudson River Watershed Alliance.”

“I kind of think I could be useful to watershed groups, no matter which watershed it is, to help out with whatever task they might need that somebody like me, who’s got a little bit of background to do something for them. If I’m contracting to help with a watershed event, I feel like I could pick up and go work in any watershed. It could be helpful to any of those groups who are seeking, “How do we get kids out to the stream?” or how do you do fundraising for a specific task that they’re looking to get some funding for. I feel like I have a lot of good ideas that I can share with people.”

Watershed Group Partners

Partnerships are people that you work with, in active collaboration. This is an opportunity to connect with other people and agencies, and organizations that may not officially be members, but may contribute in a meaningful way through collaboration.

Partnerships can help watershed groups connect with technical expertise, both science and policy. Partners cited by watershed groups include: Trout Unlimited, the Catskills Center, Hudson River Sloop Clearwater, Riverkeeper, Scenic Hudson, Open Space Institute, land trusts, county agencies, municipalities, lake associations, and academic institutions.

Staff from agencies and organizations that collaborate with watershed groups are often doing so because it relates to their own work. They often do not charge for their expertise and services. One interview participant cited this as critical to getting the support their group needed in a crisis.

Partnering with regional organizations can help validate local efforts, and they enjoy being part of a broader project.

“And it’s great for me, the feeling of working with Scenic Hudson or Open Space or the land trust or any of those groups is always pretty cool. I get a kick out of that.”

Focus groups members noted that the watershed group structure builds in opportunities to focus on the watershed, but divide up roles between members through partnerships. This strength can play out in being more competitive for funding, and providing letters of support for other partners’ projects.

"I think we found it particularly useful in terms of applying for external funding that we can reference each other as an organization, bringing letters of support to actually do either outreach type work, actual research work on the watershed, or do physical infrastructure type work. Those are all the different things we're thinking about funding-wise, and deciding who's going to lead those particular grants and who can collaborate on those and who can write letters to support. So, having that [watershed group] has been really useful in that regard, and that's certainly a strength that it brings a focus around the same kind of local environmental resource that we all care about."

"I mentioned we can build partnerships but I think we've also got to give ourselves a bit of credit for the partnerships that we have developed already. And maintaining those connections so that when an issue comes up that either we heard about or another group heard about, we're the first group that people go to to address that issue."

Partnerships with larger organizations provide support for programs, such as helping to organize large meetings. It's a strength to have a partnership with larger entities that allows the group to hold these meetings to convene partners.

"Somehow or another, the whole thing got pulled together. [One staff person] did a presentation, [another] was there... that was the summit... and [a staff person] and I mainly pulled those together... I think they're really good and important because everybody can come, like all the different ECCs and people from the public, and talk about what they're working on."

Municipalities

Watersheds can also provide a framework for municipalities to partner together on a project with mutual benefits. Having local elected officials that are interested in watershed work is also a strength.

"Knowledge. Yeah. I always want to use the [municipality name] as an example. They are the leaders of the area. Great technical people."

"The fact that recent elections have been kind to us and have given us a town supervisor and town board that are very supportive of water resources protection."

"I think that for the coalition, I think the way that we do things works well, with like our office writing grants and everybody giving us the information and telling us the work that they need to do... the way they've got that structured, works really well."

"I never show up to municipalities to tell them about a project, unless I have a plan to fix it and a way to pay for it. And that's really where our grant-writing comes in. We don't charge for it, we provide it as a service. If I'm going to walk into a town and say, hey, you've got a problem you really need to fix. I don't want to just say, OK. Well, good luck with that and walk away. It comes into doing the work. That's how they, that's basically how you earn the respect."

“The other thing I really see is kind of an intermunicipal cooperation between the village, which recognizes that one, this is effectively their water source. And the town with, you need to protect stuff upstream from us because if that’s going to affect our aquifer... I see an interest in that and I think the [watershed group] has really brought that out.”

Watershed groups interested in source water protection have also built relationships with the municipal water department, which relies on the local group to share information. Being involved in watershed group led to grant funding for the municipality.

“I think some of the strengths of the group is the fact that you have people who have a strong interest in trying to solve problems that just need to be taken care of. And we need a lot of support. And the support generally comes from outside. Whether it is through the state DEC, whether it’s through the county Cooperative Extension. Or whether it is through legislatures. Whether it is through public officials. We’ve been able to marshal a lot of help. If we had to do it by trying to contact private firms, to give us information as well as expertise, then we couldn’t do it because a lot of communities don’t have those resources. But working joyfully together, we can sit down and be able to get some of those resources. I know for a fact, the fact that I started going to these meetings, led [my municipality] to being able to apply for and receive close to a million and a half dollars since 2012 in grant money that has gone directly into being able to help upgrade our local infrastructure for sewer and water... And that has been very crucial in getting some of those projects done.”

Climate Smart Communities has also been an opportunity to engage with municipalities on issues that relate both to water and climate. The certification framework helps municipalities do environmental projects, including those that support watershed management.

“The Climate Smart Communities... That has given elected officials and volunteers cover for doing the right thing environmentally. So it's been an excellent intersect between funding and... motivations from the state level being implemented at the local level.”

Having municipalities engaged and at the table is a strength for watershed groups. Diverse issues keep watershed group members’ attention, even if not directly relevant to them at the time.

“All those diverse groups, you know, they aren't concerned about everything, but they are concerned about something. And so, we’re so far pretty good at addressing everybody’s issues, and keeping them engaged, and so they can understand that they're not alone, and also that there’s other issues, and so they can see that, okay, we’re talking about a lot of different things, some of these things may affect you not now, but later, who knows... Having all these issues makes the whole, the watershed council stronger, because we keep people’s attention.”

“[I work with municipalities] All the time. And most of the supervisors. I think it’s incredibly important to have these relationships all over the place. So yeah, I work closely for different

reasons. And it doesn't mean I work all the time with them, but it does mean if something comes up, I can pick up the phone, there's a relationship..."

"In my perspective we're at our highest participation from the constituent communities within our watershed. There's always turnover with elections but I think we have enough of a reputation that we've built that even as new officials come in, they know what [the watershed group] is and what we're working on and hopefully get involved as well."

"And so, I think their composition of folks is changing and I think I'm getting to know them better, they're getting to know me better, so I think there will be more collaboration with them."

Having experience with a watershed group helped get one interview participant elected at the local level.

"I'm happy to tell you that the [watershed] helped me get elected to the board. Because at the community level, this is an amazing credential. But when you sit with your other board members, it's less amazing."

Watershed group may have helped members get new roles. In municipal positions, or for nonprofit board roles. This is a strength of being involved with group. Issue with certain person using the group in a way that did damage to the group.

"I am sure [being involved with the watershed group helped them get municipal positions]. But again, I am not critiquing anybody. I did that. I was in the [watershed group] and then I got pulled up from there, to join the board of the [nonprofit organization] because of the work I was doing in the [watershed]."

Counties

While counties are municipalities, their broader purview and additional technical resources (and lack of local land use authority) set them apart.

Some watershed groups receive support from county agencies. The county provides maps and administrative support, including grant-writing and managing funding. Some of this work is challenging for volunteers to manage.

"...having the Planning Department involved, because they can do a lot of the email lists, and the maps, and a lot of the clerical stuff, which really helps, that a private outfitter like me, I couldn't really do it... they can handle money, we can't handle any money, so they have our account. So, it's teamwork, and if they team up with the community, whatever, wherever it is, and they have grant writers, so they know how to play the game."

"...it's been really important having [name] specifically as an adviser the last five years. ...He's a strong ally now, and it's been psychologically important, I think, for the people who join the

Alliance who aren't veteran activists, that [name] chimes in on our email list. And comes to our meetings. ...I work with a lot of people who don't rub shoulders with elected officials and agency administrators. It's a foreign world to most people. And now you've got [name] with this great title, ... just chiming in on our email list or showing up to the meetings and you know, joking about his ski trips and his whatever, you know that meant - it validated the work that people were doing in a big way. He thought this was important that he's going to take his precious free time and spend it with us."

"Having the power of a county legislator involved really helps us in bringing everyone around the table... I just came back from the quarterly meeting and there were over 30 people there, village administrator, Department of Public Works, managers from different towns and villages, some of the towns and villages have their sustainability boards so the representatives of those sustainability boards, just local residents who want to be involved can come in the middle of the work day."

Focus group participants noted how significant it has been to have county support for watershed groups. Noted the leadership of county agencies to help coordinate watershed groups through staff support, offer foundational support to get groups started, provide fiscal sponsorship, and help interface between intermunicipal projects. Elected officials can also provide key support to groups.

"In different places, a key source of support, for water staff support, and that kind of resource, sometimes fiscal, has come from counties in some places. And then there are places where town officials, local officials ...get involved, because to some extent, the citizens in their community are interested and draw them in. And so, I think that interface between local and county government with these groups, and what that means for how municipalities and counties decide to do things over time, is an important area to look at."

"...when I was more involved in watershed groups and I really saw that role of the County providing a lot of technical assistance, and that seemed to elevate some of their planning and that role of planning."

Counties can also bring resources from one watershed into other watersheds within the county. One interview participant gave an example of funding to purchase stream monitoring equipment for use in one watershed but having this equipment on-hand within a county agency also means that other watersheds can benefit. Other material benefits include access to mapping technology and databases, in addition to having county staff provide technical support through their time.

"One awesome thing that happened in the watershed is... a county-wide natural resources inventory. So there's some awesome data, and so I am also a huge proponent of this..."

Being involved with county projects can raise the profile of the group to a new audience. and supports mutually beneficial partnerships.

“So right there, we’ve created a whole other grouping of people from the community, but the community being a larger, not a specific town. So we’ve had 60 people so far that we’ve trained to participate as trail stewards. Cultivating community is just doing things that are interesting, talking to people, publicizing it, doing good programs- and making it a worthwhile- time well spent.”

“I’d say that we have a lot of really great organizational partners. So we have really great folks from our Soil and Water Conservation District and we have expertise that we’re pulling in from the watershed as well. Our funding partners also have been really great.”

“Like our Soil and Water, much of their efforts are focused in where they have funding and support, although we are kind of lucky in this part... that we do get overflow, you know, expertise and technical information. Like our Soil and Water is technically very highly competent compared to other Soil and Waters in other counties, because of their ability to get training and all of their exposure to actual restoration and hydrologic understanding of hydrology and stuff like that... [A]nd their work, their role as a Soil and Water Conservation District in the entire County, they do have the ability to completely justify participating... We wouldn't, we couldn't do things like-- They actually were proponents of doing a like, a stream management delineation, I think, or analysis. But that, they would have needed additional support or funding for. So like a special project, but just their participation and kind of coming to the table as a partner is well within their purview as Soil and Water.”

Academic institutions

Having academic partnerships in place (SUNY Purchase, SUNY Syracuse, University of Connecticut) helps with foundation in science. Many groups are interested in more academic partnerships, but geography is a challenge, along with pairing students with the types of research projects they are interested in (for example, butterfly field work over a short period of time).

“The academic connection is important, because you have to base what you're doing on science. You really do, when it comes to resiliency, when it comes to climate change now...”

“I’m proud that we’re talking about how can we get an intern involved and help the group but make it an opportunity for this person. I’m proud that we want to expand our -- make more of an impact together than we can do by ourselves.”

“I think I do a pretty good job of training the students and sharing with them the technical minutiae of doing the watershed work, but also water implications and bigger picture kind of things.”

“...on one level I want to recommend to all watershed communities that they find a local university or college that they can in some degree partner with, because that research pipeline

is invaluable and so is student energy. Those two things are two things that we have really benefited from."

A focus group participant echoed the strengths and challenges that can come through collaborating with academic institutions and students. While these partnerships are very helpful, it's challenging to get them started and find funding, and the timing of projects in the summer can also be a challenge.

In our academic focus group, participants noted that partnerships with watershed groups can help identify locally meaningful research questions.

"In my experience, the watershed groups that we work with are very good at providing meaningful scientific questions.... Meaningful, I mean, scientific questions that are both interesting to an academic, but also helpful to the goals of the community."

Academic institutions can also assist watershed groups by being seen as neutral and science-focused, and they can help to bring different people together.

"The role that higher education can play in watershed advocacy is just enormous. And what we've tried to do over the past 12 years is to, in a very sort of delicate way, try to negotiate a number, in some cases, some competing interests in the basin. And academia is actually pretty good at that, pretty good at sort of looking at and bringing both people to the table. We've often referred to ourselves as the Switzerland in the watershed, because of that particular aspect. So on the one hand, I mean, what we do when organizing it is bringing science to stakeholders, ...so we're letting science sort of move everything forward, and in doing that, like when we have speakers come, we tell them, you know, just bear in mind that this is not a scientific, necessarily, a scientific meeting, you're going to need to communicate with stakeholders who may be, you know, XY&Z within the basin, and that's been actually pretty effective. I think academics have the experience to do that and they also have the template to do it. I mean, we modeled it to a certain extent after sort of meetings like the Geological Society of America and you know it's sort of regimented in formatted and there's a schedule and this kind of thing and so I think academia can play a huge, huge role in making all this happen, in kind of a neutral way."

Academic departments provide assistance through assets like space, technology, and expertise.

"...in the department here there's about six of us who do water work, and ...it's all over the map... And the department also has this thing called... the Geology Water Initiative, which is an initiative for testing surface water and drinking water, mainly drinking water. That's mainly focused on lead actually. We have an [instrument] and stable isotope mass spectrometer. So we're pretty well set."

"[University] is a bureaucracy. A perfect place to house a watershed alliance. So, we've got rooms. We've got technology. We've got things. We've got people who have expertise. So, if we

had a workshop on leadership, we need a place. You need coffee and stuff like that! That's a little bit of money, but it is more than money, you know what I mean?"

Artists

Some watershed groups partner with artists and art organizations, which broadens their reach.

"We do a major fall celebration, in the fall... I have art organizations coming to us to plein air, to do photography, we hold a contest each year, we give out prizes in that contest... I think one of the more unusual things we do is, as I say, this show. But I have, at any time, starting in April or May, we have anywhere from a dozen to twenty painters or drawers, whatever, doing plein air work. And photographers, also. Maybe 20 or 30 photographers overall... whose work is exhibited, not only in our exhibit halls, but in galleries and libraries throughout our area. And we encourage the art piece for kids, because it's something they can relate to. They can go out and observe something and draw it, or talk about it, or research it on the internet, which is not part of our projects, and learn something about it. And you wouldn't have that if you didn't have both artists and educators very involved in your organization. So that's a little unusual for most watershed organizations, I encourage them to do more of it."

Other watershed groups

Watershed groups can partner with each other to support different strengths. They have been able to learn from each other as they collaborate.

"...the collaboration with [another watershed group] is really just a gift and crucial and essential to us... And so, the flow of information, and then access to people who can understand the more technical information, who have more familiarity with the watershed, at least [that] part of the watershed, that means that we have higher level of understanding and information that we can find ways to distill and pass on to parts of the community that are just not going to get into the nitty-gritty science of things... It's very good for us to have a sibling group who is really focused on the science, and who also have a much better understanding of how to work and collaborate with government agencies."

Focus group participant:

"... we're all doing similar water quality monitoring and had similar goals, so it kind of encouraged us to form this partnership and even opened up our lab. So we became essentially a hub for all the water quality monitoring work being done.. well, not all, but a lot of it around Westchester and a little bit in Rockland. I think that's just something to think about for other groups. I'm not sure how often groups partner to that to that extent and that was kickstarted by an EPA grant that would be what 5 years ago? Four years ago now? and we're still collaborating, even though there's not like a certain funding source that we all share right now, we're just still collaborating. Doing Sampler Trainings, Sampler appreciation events, Special

workshops and whatnot and we still, you know, some of the watersheds still use my lab, so we're still supporting other watersheds offering up our lab."

Nonprofit organizations

Nonprofits such as Hudson River Watershed Alliance, Catskill Mountainkeeper, Open Space Institute, Riverkeeper, and local citizens' groups support watershed groups by playing an advocacy role and supporting the groups with coordination of technical and community efforts.

"I'm proud that we're doing the Riverkeeper sampling... [We] used to do some of the sampling and everything, and capacity-wise we weren't able to maintain that and maintain the volunteer management, either. So I've been proud that it's continued through Riverkeeper's efforts and some very dedicated volunteers, that they're still doing the sampling project."

"[A regional nonprofit], that's what's going well for them. Because [they are] investing in the development of the group. They see the value of that, and there is no end in sight... They've made other investments... There's sampling done... And [a staff person] has put time in to do the symposium. Year after year. It might be three or four years of it. And a lot of concern that there be a group established... [W]e've been testing in the [watershed] I think for a decade. So that's the other contribution [the regional nonprofit] has made. 10 years of data."

"I've had a number of conversations with [a regional nonprofit] about how you move the levers, the communication levers. Because it is good that the press picks up on things, it is good to be able to have a local person just read the paper and say, "Huh, I didn't know that that was going on." So that is another type of communication that's really, really important. The whole press thing is a separate topic, and it's a very important topic that has not been something that we've been working on quite hard actually."

"Well I think a lot of that [building relationships] came from the initial work that came from the [Hudson River] Watershed Alliance. So being able to kind of marshal those resources was really a big deal... And, you know, the reputation of the Hudson River Watershed Alliance meant that we got a lot of county people, we got a lot of municipal people, a lot of academics..."

Support from New York State agencies

Having support from New York State agencies is significant for watershed groups. Having DEC staff at meetings and sharing information shows support. One watershed group took a New York State governor on a canoe trip paddle to convince him to provide support as match for federal funds to help purchase land for protection.

"It's great that they're very supportive, to have [Hudson River Estuary Program staff] come down to the meetings. It's really helpful, it shows that the DEC really wants to be involved and they've got good ideas."

"I would say our relationship [with DOS] is really good. We have a great relationship with the DEC. And our Region[al] people are awesome. They may not be able to show up all the time, but they are always willing to answer questions, come when they can, give us advice if they can... We don't work much with the DOH. DOT, I've always had a really good experience with DOT, I know other people haven't. I've always found them to be very responsive."

Technical Strengths

Watershed group members were confident about their technical strengths, whether they were "in-house" or had direct access to professionals with specific skill sets. Some technical strengths they mentioned included access to information, ability to look at sites and issues from different perspectives and scales, and the ability to create baseline datasets and site-specific maps.

Interviewees noted several interesting points about their technical strengths, such as the importance of using science to validate the efforts of volunteers, the critical need for science to be relatable to the community and what they care about, and the need for direct pathways for their science to be used for advocacy work and local decision-making.

"Yeah, you're appealing to a more altruistic group, but the fact that we've done the science gives us a tremendous amount of credibility in the community... So our academic piece helps, the research piece helps people have confidence. So when we say something, we know what we're saying."

"So we're about to oppose a rezoning issue on the [stream]. And the fact that people know that we have sampled the water, that we have shown that the water in that river now, and its two closest tributaries, is pretty pure, it makes it very hard. It makes it a case that we can go in, and say, 'First, you need an environmental impact statement' ... We're not the kind, we don't have the money to get involved in lawsuits, if they're going to pass this rezoning anyway... But our science may help some other organization. It definitely will help the DEC in its regulation. And we will then go back to the planning board when the site plans are set up, and insist on every precaution possible to trap the oil, trap salt, to, yeah. We'll be going through that, and we will be obviously be providing the town with information that they don't want to have, but we'll just see where it goes. We'll do the best we can."

"We got a report with lots and lots of data, lots of graphs, lots of wonderful stuff, but nobody knows how to understand it. But it's still relevant. ...[I]t's a beautiful baseline."

Owning and operating stream gages came up as a specific and important technical strength for some watershed groups.

"The sixth one is connected to the internet, they're working out some bugs, but it'll actually give real-time water level data for the [stream] in [municipality]. That's good, because [this municipality] is the most flood prone area of the watershed... So we want, it would be nice to have, real time, so the local officials can see how high the water is rising. Also, I think there's

some alarms built in... As a corollary to that, we worked with the [municipality]... on their New York Rising, and then I worked with the [other municipality] on their New York Rising project. And then as part of that, I taught the consultant for the [other municipality] New York Rising, they did like a watershed drainage master plan, so they did computer models of the streams. So I was at, they gave me basically the rating curves at the gage sites. So we haven't done it yet, but we'll be able to now translate the gage height data into discharge data."

One watershed group has developed a flood gaging system that can transmit important information on watershed conditions to municipalities and emergency managers.

"We have 6 stream gauges that are throughout the watershed... and all of them have telemetry capabilities so you can log on online and see the water height. And two of them will have or [do] have the capacity to do a SMS alert system, so they can text if there's going to be a flood event, so we put those two in areas that are flood-prone. So that's exciting."

Others mentioned they have access to water professionals that have expertise and can contribute different types of technical knowledge.

"And I mentioned before DEP's presence here, there's a tremendous amount of water professionals in our community's DEC and DEP, and other agencies. Ulster County Soil and Water, Ashokan Watershed Stream Management Program and Cornell Cooperative Extension. And so there's a lot of richness here, of learning, too, such that you can execute good practices. I would say the municipalities don't necessarily have deep water knowledge, but it depends. Some people have some, and it's a different kind of knowledge, maybe."

Planning

Some groups are strong in planning, either on their own or in partnership with agencies and organizations. Several have plans that guide or support their work, and groups have found that planning brings people together. Developing a list of priorities for the watershed is good for the group itself, but also good for communication with others. One group mentioned they conduct regular reviews of the recommended actions in their watershed plan to develop an annual work plan and review potential opportunities. Even watershed management plans that were created in the past or are now outdated can provide information to help guide work, in addition to providing a baseline of past data.

"That watershed management plan was completed in 2014, and has been one of our main guiding tools ever since. We tried to pull that out about this time of the year, as we are doing our planning for the year, to look at what parts we have accomplished, what are the next best steps, opportunities. I think there were 52 recommendations in that plan. So obviously we haven't accomplished all of them. But you can see when you look at it that, oh, we've done a lot of work in this area, and going over here is something that we, community outreach and things like that, we haven't been quite as effective in."

“And the first main thing that we did was kind of this visioning, with the sticky notes like here – so, you know, we modeled it after our six major issues, like these are the things that we want to address. And we just had the poster boards up and had everybody with their sticky notes. And it was kind of like, what’s your problem? Or what you need money for? And why do you care? And what’s going on? DOT was there, trying to think about that visioning one... Then they do the whole, the vision and goals. And then each member of the coalition kind of took a chapter so, that, because like I said, we have a super diverse landscape. We also have super diverse soil and water districts. We have ones that are very ag oriented. We have ones that have no ag. We have ones that are very urban oriented. We have ones that are not. So, everybody kind of took a chapter to write about the things that they are most knowledgeable about. And we all compiled that and then my office, kind of took all that together and then made a document out of it.”

Some groups mentioned the benefits of having a specific plan that is geared toward on-the-ground implementation or an educational need.

“We do roadside erosion assessments. We started it in [one watershed], and it helped us get a ton of money, so we did it in [another]. And the districts drove around, and took pictures, and we had a matrix of all the different information. And then there’s a ranking system. You get scores for five of the parameters. We have five to ten. And then you end up either a high, medium or low priority for implementation to fix these... We have it organized by county, by town.”

“One of the things that we did just launch that I guess we could be proud of, we just last year did an, essentially, a strategic plan for our education program for the next three years and really looked critically at what do we do well, what are the needs of our community and how do we expand what we do to meet those unmet needs. And we assembled a board of educators and administrators and other non – not necessarily education nonprofits, but other community groups that work with youth that might do – overlap with us educationally. Or content wise. We learned from them that they think that what we do, we do well. And they want more of it, which is great. So, we are looking at ways that we might be able to bring another educator on board and be able to meet a larger need. Then we talked about areas that we’re not talking about currently like climate change. Including curriculum around climate change.”

Planning processes that included a diversity of community members were cited as a strength of some watershed group efforts.

“The involvement of diverse audiences and it was also a melding of the plan that [the] County had already done... it really just needed interagency, intergovernmental and intercounty cooperation.”

“We also are, for the first time, starting to offer bilingual education. Although most of our staff is bilingual anyway, Spanish, we’ve never formally offered Spanish language programming available. We’ve done it on the fly, or when we’ve recognized that a school would prefer Spanish to English, but yeah so now we’re starting to offer that and that is really exciting.”

Communication

A key strength of watershed groups is raising awareness and bringing attention to watershed issues. Watershed group members are equipped with information and able to communicate about the watershed and its issues. Groups use a variety of communication pathways and mechanisms, including social media, tabling at community events, word of mouth, branding/identity, direct outreach to municipal staff and elected officials, and trying to be as inclusive as possible during meetings.

“First and foremost, making sure that we’re including everyone with our outreach, with our meetings. We’re trying to do-- this past summer and fall we did some more targeted outreach... at town board meetings, village board meetings. I’m trying to make sure we hit all of the communities within the watershed equally so they all feel they have representation and stake in the game.”

“We have been able to make contact with legislators in the past in order to achieve goals and keep the lines of communication open so that they can begin to--at the county and state level--to implement solutions for problems that we are having. Which I think has been good and improving over time.”

“She is a PR professional, she runs our Facebook page and keeps it operating at a very, very high level. So she’s filtering which posts come through, when they come through, and just making us a very trusted outlet for information within the community... [She] can then take the gist and the article and post it on our page in a way that’s not going to rile anyone up too much, but it’s going to make the information available... A broader audience, which has been really important for us.”

Even when a group is no longer active, people still contact the former leader about the watershed, highlighting the important role of information pathways and community connections.

“But I still have this affiliation with [the watershed] because of all the years I spent in [the] County. People still contact me and ask me questions about [the watershed]. I have one now, a gentleman has contracted to do some work on putting up some wayside signage, and he was referred to me to ask questions about the watershed and maps and stuff like that. So my name is still tied to [the watershed]. And I’m happy to answer those questions, of course there’s no funding or anything like that but I want to help people out.”

One group member mentioned a critical outcome of raising awareness of the watershed in the community: it results in “more eyes on the streams to watch for potential problems.

“I think we continued to get our awareness up about the watershed, and people just in passing knew about this thing, about the watershed, something about the watershed. There was more talk, more buzz in the community about what might be going on, maybe that’s why my phone

was busy with, 'I saw something on the creek today,' people were like, 'There's something about this watershed woman, let's tell her.' And there was somebody to go to, to report that they think they saw something, there might be a problem. In a way it made me feel good that there are eyes on this stream now, there are people who are wondering or curious or noticing stuff. Whereas they just drive over that bridge and don't even think to look at the creek. So I think that awareness building that occurred during that time period was pretty good."

Programs

Watershed groups are very proud of their successful programs. Watershed groups provide a variety of programming, including regular meetings, lectures, conferences, outdoor excursions like hikes or walks, etc. these events and programs help raise the watershed group reputation, and reach and engage new people. One watershed group participates in an annual science fair. Watershed group programming in the Hudson Valley is extremely popular - from fully subscribed small events to 700 people turning out for a community event.

"Most of our hikes and walks are either fully subscribed or oversubscribed. Our canoe trips, always oversubscribed. We turn people away."

"For a small group, I think we have pretty good turn-out. And people seem to like our programs and have a good time, and that's something we want to keep going."

"We were recognized nationally last year for our environmental education programs around our community science."

"...we had a clean-up... and we had 75 people come out... We didn't foresee that many people coming out, the weather wasn't great either, so it shows that there is a need and a want for people to give up their Sunday and come out and do good."

"And what was cool in that room was, they don't all regularly talk to one another, and there was one moment where two of the agencies connected on some topic that, it was very helpful to know what they each were working on for each other. So there was that collaboration that was really useful."

Water quality programs use robust methods for community members to collect data that can be used by decision-makers - legitimate data. They get work done, and they also bring in their lived experiences and stories.

"Well just about anything we decide to do, we get it done."

"What my ultimate goal for all of these programs are, is to create a more scientifically literate citizenry or body of people – that communities can not only use the data, which is irrefutable if collected properly. Which is what we ensure, that it's always collected properly, so that it can be used if you want to go to your elected officials or you want to have an organization sue or

anything like that, that it is not questionable data. And so, if a community member goes to their elected official, goes to a public hearing, writes a letter to the editor, or does some sort of social action, that the data that they are using— in addition to the anecdotal stories that they're talking about, that are their experience, and their lived moments. That they are able to be taken seriously."

Education programs that focus on science were cited as important deliverables for watershed groups, as they connect the community, inform, and engage a broad range of participants, and lead to new efforts.

"I think education and understanding about the risks of flooding and its causes is working well, it's kind of tangential, but what's working well is actually helping people understand the reality of climate change and the impacts that we're facing."

"So we started the symposium because the playing field was not level. It was very heterogeneous and hierarchical. And we had just been through a bunch of floods and it was clear that we needed to have stakeholder engagement. And so with the simple, simple goal of stakeholder engagement is who do we need to engage, why do we need to engage them, and what are we going to be talking about. So from that, that gave rise to the Watershed Symposium and that's been galvanizing. It's sort of focusing on one of the particular issues and topics that are central to the watershed. And including, actually a main part of what's come out of that has been the DEC's Action Agenda. It's sort of been directly related to the discussions that have happened in part to impart with the Watershed Symposium... And the Watershed Symposium has been really, really good for [engaging the community] because-- this year for example, one of the principal planners for the city is speaking, and so it's a matter of inviting people in and opening the doors, and also making the dialogue and the discussion accessible so that you don't have to be a scientist to sit there and understand things... There's ample time for everybody to talk. And that's actually probably one of, for many people who go, the most valuable thing. You get people engaging people and saying, I didn't know you were doing that. And actually, we know for a fact that we've had a number of projects that have come directly out of things that have happened at the Watershed Symposium. So, we are not only, I think, helping to shape the dialogue and to focus attention on critical items, but we're also promoting work, promoting science."

Even though the scope of this particular group is focused on their symposium, it is very special in bringing many people. Of note, this symposium helped people recover from the crisis of Hurricane Irene by talking about it.

"The energy and the enthusiasm around the Watershed Symposium. That sort of defines us. Maybe, and hopefully that will change in the future, but it's what defines us now... Bob Boyle, who passed away two years ago, said there's nothing else like it in the state. And he was a keynote speaker and he'd gone a number of years, and Bob knew watersheds in New York State. And he said that because he said it's active, it's dynamic, people are engaged, but also the appreciation that there is a whole diversity of stakeholders that show up to that thing and talk

and engage and ideas – science comes out of it, projects have come out of it, papers have come out of it. That is a hugely satisfying result... The one that was most profound and most – I don't even know if profound is the right word, I guess – was 2012, the year after Irene. The basin was shell shocked. People didn't think we could recover. That meeting was just weird, no one wanted to talk. We had to get people and shove them up onto the stage because everyone was just in shock. But one of the things we did is we got everybody together and said, c'mon, we're going to move forward."

Organization

Watershed group members cited specific organizational characteristics that they felt contributed to their strength. These include attaining 501(c)(3) status, legitimacy, and the ability to withstand transitions.

"[Our watershed group] is entering its 30th year in existence. Which is one of the things [people find] outstanding about watershed organizations or any nonprofit organizations that's fully volunteer."

"I feel like we're just well organized, and people appreciate that."

"...we were really able to say, OK we have a steering committee, and the steering committee is five of us... We each have strengths, which are very different from one another, and what we realized after a very challenging, chaotic start was that we have a very, very strong foundation. And so steering committee meetings are five people, and then there have really been people that have been helping us regularly around that, in different capacities."

"We are now, recently now, [a 501(c)(3)] and that was really just so we can apply for grants through ourselves. So, I mean, it opens us up to being able to not just get municipal grants, but also grants that are available to 501(c)(3)s, and build the capacity as the organization."

Even groups that have been around for a shorter time have noted that good organization has been a key factor to keep a watershed group going.

"I think that we, for a long time, people were trying to organize in the [our] watershed and weren't getting to it. And we finally just like buckled down around a table and said, this is important. We need to do this. This is how New York State is going. Everyone's got a watershed coalition, if we're going to get anything or do anything, we can't just be our own little islands anymore. We need to organize. And it's tough to organize, it's tough to organize people. It's tough to become a 501(c)(3). There's a lot of paperwork that goes along with that. So, I think that one of our greatest accomplishments is in a short span of time.... We went from absolutely nothing to kind of legit."

One group member mentioned that having a skills inventory for their membership was an important component of their organizational strength. It allows the group to track members' skills sets and availability, and other resources that might be available, other organizations' missions, etc. This concept came from conversations with EPA, which had recommended some formality at the start to document what people wanted out of the group.

"So, we can build a skills inventory, so we have done that so far. I think that's another strength that we have... I requested a stakeholder document from each individual or organization that wants to be a part of the [watershed] to give some formality of the group, as well as really identify what people want as an input, what they are willing to give to the group, and what they want out as an output of the group. And then we were able to kind of see overlap and that helped us identify our vision as well what projects we might want to look at in the future. And then a step further from that was identifying skills, so really what each individual as well as organization's mission is, what their expertise is, what maybe funding they have access to that they might want to share, what they don't have access to, what capacity building efforts we might need in the future. So, we have that as another running document to reference and that is something else that I want the group to look on and reflect on every so often so we know, we already have this available to us internally with all the great people here, what do we not have and who can we pull in. Or what do we really have to look for funding for to make that happen... [T]he EPA was saying you need to make sure that there is some form of formality or just some reference to what people said they wanted at the group. So, you make sure you're not pulled in 15 different directions and the group just doesn't fizzle out. So that's where the stakeholder documents came into play, too... this is a good kind of framework to show stake and partnerships in the long-term of the watershed group."

One group member noted that people come to meetings because they are well-organized and productive.

"[J]ust building a system is really important, to the degree that it's strong enough that people who are, if you're going to go outreach, feel like this is interesting. More people would think that than not, with a good infrastructure. Like people are coming to our meetings regularly because they know they're productive. If they're not productive, nobody's gonna come. So the outreach component is important but naturally happening... [I keep meetings productive] By making sure that the agenda items are things that are brought forward by the group. And following up on those ideas. So that their ideas are captured and not forgotten. I think it's nice, I think people like being heard and, you know, like that you were paying attention to what they have to say. I think running meetings in a democratic way is so important and not everybody cooperates. Sometimes someone can just take control for a little bit and you got a find the right time and interrupt them without... I mean it's really tricky. But I think being people realizing that every month, the stuff that they're saying is important... we're following through to the end. We're going to have a result. They're going to have to create it, but they're kept on point until it's done."

Having the organization in place provided support for communities after Hurricanes Irene and Lee. The group existed before the hurricanes, and provided structure to communities after the crises.

“It was kind of lucky and nice that we actually had our advisory committee set up before [Hurricanes] Irene and Lee hit, cause it was actually a little bit of a support system. Our Soil and Water Conservation Districts sat on a committee and we had, we have a resident who... I think he’s a hydrologist, too. So we had at least a foundation for support to just start there. And even just to come with ideas of how to go about the aftermath of Irene and Lee.”

Another group member noted that their group has a physical space where they can meet and plan, contributing to the connectedness of their group to the resource.

“And we also have a [physical] space, I think that’s a huge help to us, too... And you can hear the stream with the windows open right there, and you can go out and experience the space.”

Funding

Watershed groups provide access to funding and other resources, which in some cases would not be available to municipalities working individually. Watershed groups have been able to help municipalities leverage funding for their own projects. A municipal official noted that:

“So that’s been extremely helpful, and for some administrators and other elected officials, who may look at [watershed group] and say, ‘well, it’s a bunch of tree huggers’ or ‘it’s a bunch of people who are just trying to give us a hard time because they want us to do more than what we are capable of doing.’ But it’s exactly the opposite. The group is there to be able to make sure that you have resources that you would not necessarily have access to unless you work together as a group.”

A watershed group member cited county support as important for supporting intermunicipal coordination, including projects of the watershed group.

“And I give credit to the county, because they started with doing a program of shared service grants. Which went out there as a separate source of income for any kind of municipal projects where the service is consolidated. Or problems were being worked on jointly and being funded. So that eventually it would come out in savings for not just tax-type savings, but also for just doing things more efficiently.”

Some watershed groups have been successful in securing grant funding for their work:

“So what’s working for us, as a general statement, is that we’ve been very successful getting the grants that we have sought, almost surprisingly so. So that’s been working for us in all those realms.”

"I think our major accomplishment is getting the implementation funding that we've gotten with just that little tiny priorities action document... We're not a funded watershed coalition. We have gotten funds for some of the things that we wanted to do."

Raising funds through dues is a strength. One watershed group also offers municipalities an educational kiosk in a public park when they pay their dues. For some groups, dues provide a valuable source of funding for activities.

"I think it's going well that we're, that we do get a lot of participation at our meetings and that we've been able to raise money through dues. I think right now, I think we've raised a total of \$21,000."

Healthy Watersheds

Two watershed groups also mentioned having a healthy watershed with limited development as a strength for their group.

"I'm very proud of our stream quality, we kind of have that, what we can call relatively pristine streams... and the wildlife and the biodiversity of our streams and within this watershed I think is a huge asset and has a lot of value, economic and also an aesthetic value, but also this kind of intrinsic [value] ..."

"It runs through a lot of agriculture that is transitioning over to organic farming. So the loads on it are probably decreasing somewhat. It doesn't really go through any major towns, so it's relatively undamaged by town-type issues. It does go through [one town], where there is a paper mill. It is its only industry... And so the [watershed] is kinda lucky, in terms of its geography and its siting."

Watershed Group Roles as strengths: From Focus Groups' Perspectives

Focus group participants highlighted a variety of important roles that watershed groups play that they consider strengths. These roles are unique and help move work forward, helping regional organizations or agencies with their goals while also supporting local priorities.

Advocacy

One of the focus group participants highlighted the unique role that volunteer groups can play in advocating or setting their own role because they are not limited by bureaucracies or other structures.

"...because they're not government as well they could advocate and could do essentially whatever they want, right? They're not encumbered by any red tape, like a government entity"

would be, or even an academic entity. So, I think that's a huge strength that is sometimes underutilized, maybe."

Generating ideas

Two focus group participants shared their perspective on the strengths of watershed groups in brainstorming and identifying good local projects. Particularly for regional partners that offer resources to implement projects, this role of local watershed groups to connect available resources with local needs has been very valuable.

"I think they're good at coming up with ideas. Maybe not the follow through, that's sometimes hard, but I mean, I think they are great source of brainstorming and ideas of ways to make your watershed a better place."

"I think the really amazing role has been to help us find good projects, and then help us get them done and take care of them. We've been working with [another organization] this year to try to do a new initiative where we're trying to get the word out a little bit better about exactly what kind of projects we're looking for, and trying to help watershed groups to better choose those best projects, so that they're getting projects that are going to have an impact, both on the community but also on the streams and the streamside areas."

Inspiring others

Focus group participants noted the important role watershed groups offer space to inspire others.

"...kind of a place for inspiring others... I've seen that a lot, with working with the younger students and getting people engaged and asking questions and thinking about things differently than they have before. And I think that that's really valuable, and there's no way to quantify that, so it's hard to really acknowledge it, but I think it's really special."

Communication

Many focus group participants felt that the communication role that watershed groups is an important strength. They are able to call attention to problems, support elected officials' desires to take action, and set the agenda on local priorities.

"I think that one of their strengths is getting things noticed... [One particular stream has] some serious water quality issue, and apparently, it's had them for years. But until this small group formed, everybody sort of just turned a blind eye... I think their strength is that they are a small group, but they have a big voice. And they're pushing and they want to do something there."

“A lot of people don't want to you know call attention to problems in their community for one reason or another. And watershed groups often are the ones to say hey, there's a real problem here.”

“... if a watershed group is making noise about a problem where the need to address something is in their watershed or in a community, that can potentially and sometimes does give a local elected official or someone else who has maybe more somewhat more power, more comfort to take on that issue and that can operate in several ways. One being just, it's their constituents telling them they want something. But also, sometimes there are people in government who really want to be more outspoken and do something. And if they have citizens or an organized group that are coming into their board and saying, you gotta do something, that can sometimes give that person who otherwise might not be so comfortable pushing it as far, more ability to stand up and say, well I guess we better do something about this. ... I think that can be true at the state level, too, having people on the outside pushing things.”

Another focus group participant shared the importance of having watershed groups to communicate with their elected officials, as constituents. Elected officials are more responsive to their residents than outside perspectives, and watershed groups can help convey these important messages to local decision-makers.

“... I may not be a constituent, so I might say to a council member or a supervisor, ‘Hey, you really need to do X, Y and Z to protect your water quality,’ and they look at you like, well, you’re a regulator, or you’re someone who is just trying to create work for our communities, so they are less receptive. And only a local constituent, in most cases, can really grab the attention of an elected official or a decision-maker in the community and get them to implement a project or a program, because at the end of the day, they are concerned about either being re-elected or representing their constituents. ... I think you absolutely need that at the table to get this important work noticed by elected representatives at the local level.”

Watershed groups are also able to communicate about issues of importance in their watersheds through their events and other programming. One focus group participant that has been involved with planning an event shared its significance in setting the agenda and bringing attention to their priorities. This person gave examples of bringing new funding resources to the watershed and starting difficult but important conversations on management actions with agencies.

“... it involves local stakeholders in the basin, but it also involves the state and people at the federal level, and we've been very careful and very successful involving politicians with this particular group. ...[W]e've actually changed the dialogue in the [watershed], there's just no there's no question that we've been hugely effective at getting people to think about different important aspects that need to be addressed. ...[T]he dialogue is easy to get going, and communicates with stakeholders in a very meaningful and effective way, because it does sort of spark ideas and attitudes at the sort of grassroots level and that percolates upward. ...That matters in a big way to be able to move things forward.”

Education

Focus group participants felt that the role that watershed groups play in education is another strength. This includes educating residents and engaging students of all ages.

"I think that education is something that a lot of groups are really good about. I think in informing people about their watershed, and also just ...getting people to understand that they live in a watershed, you know, kind of like what is it? ...[T]here are some groups that are really good at getting... students out in the creek, learning about the creek. ...College students down to first graders."

One focus group participant shared that the role that watershed groups play to educate themselves, in addition to their communities, means that there are more educated decision-makers. Watershed groups are able to motivate community members to pay closer attention to water issues. Even if residents are not attending meetings or going to events, they may be paying closer attention and acting as more educated community members.

"Education, so it's almost a self-education process. And the more they learn, is the more they share information. And I'm going to go back to small towns in our area, those are the people who lots of times serve on town boards and planning boards, and they make decisions that impact the watershed. And the more they know, is the better decisions they can make."

"Part of that education is motivating people to show up or act or participate. And I know that the watershed group around here has definitely raised concerns about water quality issues, and has motivated me to pay more attention and motivate others to go to events and things like that."

Building political and social capital

One of the academic focus group participants shared that an additional strength of watershed groups is building political and social capital around issues. A watershed group is able to do this in a way that academic conferences alone can't do.

"One of the things that they can do well and some do, is build political capital, social and political capital in a way that, an academic conference by itself is simply not going to do."

Getting work done

Focus group participants commented how watershed groups are willing to do their part in getting the work done. They want to play a role in improving their watersheds, and not just hand a problem off to someone else to solve. They may need support from regional organizations or state agencies to understand exactly what needs to be done to move the work forward, but they want to actively participate where they can.

“They're not saying, we're identifying this problem, you fix it. They're saying, we've identified a problem, we want you to help tell us what to do. And I think, to me that's the biggest strength. Working at that smaller scale, they're more invested, and this is the stream in their backyard. This where they live and where they work, and they want to know what can we do to fix it. And I think that's to me that's the biggest strength is having they care and they have that passion to follow through and be pushed when it's needed.”

“They're very good at plugging into state programs or county or whatever. They're the ones doing a lot of the stream walks or different kinds of monitoring or stewardship programs. And I feel like that's something- a role that I don't see really anybody else taking on... [I]t seems like the watershed groups have a real strength in filling that part of the water monitoring of water quality and stewardship related activities.”

One focus group participant that had previously been involved with a watershed group noted how exciting it was to enact real positive change.

“I think what excited me most about working with the [watershed group] was when we were able to get real change to happen. ...There is something that was very exciting to me about being involved with the watershed and seeing the good planning and good knowledge base that came from the watershed group actually becoming reality in these communities.”

Another focus group participant added that watershed groups have been able to take advantage of NYS DEC's WAVE program in particular. It has been valuable to have well-established protocols for community science, programs to plug into, and a way to get volunteers. This has been very useful for public participation and getting volunteers out into streams.

Local knowledge

Last but not least, focus group participants noted that a strength of watershed groups is that they know their communities well, both in terms of the physical landscape as well as local politics and networks.

“...they know their community. The best out of anybody... and they know the landscape way better any county or core state agency or anybody like that could, so that's a huge strength.”

“So I would say what they're what they are good at is kind of leveraging existing community or social networks to get folks out and do things to get people to care. ... It doesn't matter whether it's a more civic organization, social organization, or if it's the PTA, or what it is. I mean, that is the granular knowledge about how to work with the community that they hold.”

Accomplishments

Many interviewees talked about their groups' accomplishments in terms of how they grew community support and increased engagement, while still completing important infrastructure and water quality efforts.

"A huge success that we had was in the formation of the restoration advisory committee. We were just so proud of ourselves. Because again, it's one of those things where it's like, they're assuming that the community is not going to be engaged. They're assuming that the people who are going to show up are not going to be representative. Maybe wanting that. And we, through our outreach, and through our work as selectors on the restoration advisory committee, were able to both get a really impressive applicant group together, who was very, actually, reflective of the community."

"Also at the back of our current plan we have a list of recommended priority restoration projects. We are – I'm really excited to say that we are pretty nearly finished with that whole list of projects."

"The green infrastructure stuff is - everything takes time to...it's like a paradigm shift right? From getting rid of the stormwater as quickly as possible to trying to hold it back and soak it in and all that kind of stuff. I think that's going to go forward whether I'm here or not, but I'd like to think that maybe went forward a little quicker... because we were promoting it."

"I haven't made people into environmentalists, but I've made environmentalists into involved people, sampling the water, meeting their peers, the watershed group."

"Right now, I'm really proud of the fact that we're uniting as a larger group, that we've started making headway. Obviously, there's still a long way to go. The fact that we've tackled this massive project of putting together a new watershed management plan, and one that hopefully addresses the issues more seriously, the fact that we're pretty far along in that process is definitely something that I'm proud of."

"And they proved to be a real thorn in our side. But right from the beginning, we insisted on including them in all of our stakeholder meetings, because we wanted to find a solution that worked for everyone. Because these are good people, we didn't like the fact that they were kind of nasty about our project, but they're good people and they have a good mission themselves, so we wanted to find a way to make it work for everyone. And we did, but it took 36 designs... Each time, we would go through the process of vetting it with all the different stakeholders. We finally got to a place where everyone signed off on it, that took two years."

"...bring these small streams out of anonymity, so that people will engage with them and learn to respect them and take care of them..."

“Just being able to keep it together for this long.”

“I think that the community bond that and just the network of supporters that we’ve created...”

“I feel like that’s one of the things I’ve been more proud of. We just don’t go around telling everybody what they should do, we jumped in and we found the money...”

“...the impact we can have on making the town a better place, making sure people get out there on the watershed, close to home recreational, all the goals that are in the New York State Open Space Plan, which is close to home recreational activities, healthy activities, outdoor clean water.”

“My view is that sharing experience and ideas and borrowing them is the best thing, because we’re all small organizations, and I have no ownership on anything. As long as it’s good for the river or for the watershed or for the land.”