



THE ANDREW SABIN FAMILY

CENTER *for* ENVIRONMENT
AND SUSTAINABILITY

CLEAN WATER AFTER SACKETT

A SYMPOSIUM ON THE LEGAL, POLICY,
AND CONSERVATION IMPLICATIONS OF *SACKETT V. EPA*

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Panel 2: Ecosystems and Land Conservation

Bill Holman, Senior Advisor, The Conservation Fund

Carolyn Ward, Blue Ridge Parkway Foundation

Secretary Reid Wilson, North Carolina Department of Natural and Cultural Resources

Moderator:

Ken Bridle, Conservation Advisor and Inventory Biologist, Piedmont Land Conservancy

Stan Meiburg: Let's go ahead and get started with our second panel. I'm going to turn this panel over to Ken Bridle. One of our panel members has momentarily walked off, but I feel sure that he will reappear. But let's go ahead; Ken, let me turn it over to you.

Ken Bridle: I'm going to have the panel members introduce themselves, and I'm sure Bill will wait for a proper time to make a big entrance. So, Carolyn, would you like to tell people who you are and what your background is?

Carolyn Ward: Sure. I'm Carolyn Ward. I'm the CEO of the Blue Ridge Parkway Foundation. And I was born and raised in southwest Virginia and got my both terminal Masters and Ph.D. degrees from Virginia Tech. I cringe a little sitting here at Wake, but that's okay, nobody knows me here. My degree is in forestry. My specialization, though, is in Social Psychology. So, how to control visitor behavior in a free-choice learning environment when they can do whatever they want when they're out in the woods or in public lands. But we want to try to help convince them to do the right things of their own choice. And then it becomes a decision that is more long-lasting and becomes something that they carry with them after they're exposed to whatever the intervention was that we tried to introduce to help modify their behavior in the right direction.

I spent 15 years at a university in Northern California teaching, and about 14 years as an editor of a research journal. And then found my way back here to home in the Blue Ridge, where I



came to start the Kids in Parks program and have been functioning as CEO of the Blue Ridge Parkway Foundation since 2010.

Ken Bridle: Excellent. Thank you, Reid?

Reid Wilson: Good morning, everybody. I'm Reid Wilson. I'm the Secretary of the North Carolina Department of Natural and Cultural Resources, which is just a wonderful place to work. I've got to tell you, we take care of things people love about our state, literally from A to Z, because we have art museums including SECCA, which now has a new name here. I don't know if you know that, it's now the North Carolina Museum of Art - Winston Salem. That's true, by law. Plus, I got \$15 million in the budget, but I digress. Anyway, art museums, A, to the Z, the zoo and all these other wonderful places: parks, aquariums, history museums, historic sites, African American Heritage Commission, American Indian Heritage Commission, Land and Waterfront, Natural Heritage Program. I'm leaving half of the Department out because I don't want to spend forever on this. But it is a place that interacts with all sorts of people every day. Not far from here, there's Pilot Mountain, Hanging Rock, Horn Creek Farm Historic Site, a new historic site, which isn't officially open yet at Shallow Ford. But we went there and celebrated it a few months ago.

Before I became the Secretary, I was in the first four years of the Cooper administration the Chief Deputy Secretary, so the number two, and most of my responsibility was on the Natural Resource Divisions in the department. Before that, I had the great pleasure to work with Edgar Miller at the Conservation Trust for North Carolina, one of your previous panelists. I was the Executive Director there for 14 years. Before that, I didn't live in North Carolina. My wife and then two little kids came down about 20 years ago. I had worked at the Environmental Protection Agency in the Clinton administration, three different jobs there, the last one being Chief of Staff at the agency for the last 2.5 years or so. Before that I was Political Director of the National Sierra Club. Before that, I worked on a number of unsuccessful Democratic campaigns for higher-ups.

I grew up in Rockville, Maryland and love living in North Carolina and hate going back to the DC area; it's just ugly in so many ways.

Ken Bridle: Excellent, impressive and thank you. Bill made his timely entrance. So, Bill, we're asking people to introduce themselves and tell a little about yourself.

Bill Holman: Thanks again, and I apologize. I went up to get a cup of coffee and ran into some friends, and these things happen. I'm Bill Holman, I'm now actually currently a Senior Advisor at The Conservation Fund, which is a nonprofit land conservation organization. A few months ago, I was North Carolina State Director of The Conservation Fund. And I've worked at The Conservation Fund for about ten years.

Like Secretary Wilson, I've changed jobs a number of times over the years. I've previously worked for Governor Jim Hunt as Assistant Secretary, then Secretary of the Department of Environment and Natural Resources. I got to run an agency called the Clean Water



Management Trust Fund for about six years. And then I worked at the Duke University's Nicholas Institute for Environmental Policy Solutions. I've been a regulator, and a funder, a thinker; that's what I call myself. Then kind of back into the land and water conservation business.

Prior to being an environmental regulator, I was an environmental lobbyist at the General Assembly, and like Robin, as the previous panel was talking, I was having a number of flashbacks to work that was done at the Legislature and then at the Department of Environment and Natural Resources. In those days, when the federal jurisdiction was being pulled back for protecting wetlands, the State of North Carolina was being progressive in filling the gap to maintain the protection of wetlands in our state. I did work in my first job out of college as an environmental lobbyist, first starting with the Conservation Council in North Carolina, then the Sierra Club and others.

So, I've had a wonderful career, and I'm going to retire at the end of this year. I have some Triad connections. I was born over in Greensboro, and my family lived here in Winston Salem about five years before moving to Raleigh. And my wife and I have recently decided to return to Winston Salem. She grew up here and has family here, so Winston Salem will be base camp for hopefully future camping and hiking and other road trips on the parkway and other places.

Ken Bridle: Excellent. Thank you, Bill. Yeah, I also had flashbacks during the last committee meeting, or the last panel. I have done Natural Heritage Inventory in Forsyth County and surrounding counties. And years ago, I also did wetland delineation and stream classification, so I've been back and forth with the 401 and the 404 permit and regulations changing in the middle of projects and working for conservation groups where people like wetlands and working for development clients that don't like wetlands. So, it was a very interesting career. I've been with the Piedmont Land Conservancy for 30 years and I'm also in the same kind of trajectory that Bill's at, in that I'm in a sort of glide path to some kind of retirement, which is probably not going to be very slow, so far.

I think what we're supposed to do is talk about the impact of the *Sackett* decision on conservation and conservation organizations. So, I guess we'll start with the Secretary and ask you for 5 minutes or 7 minutes of some sort of discussion of how you think it impacts conservation in our state.

Reid Wilson: Okay? Right. I'll attempt to do that. I had a work event in Raleigh till about 10:30 last night, so I wasn't able to get here at the beginning of the last panel. But I did get here in time for some of the last discussion. And maybe some of what I'm about to say will be repetitive, I'm not sure. But I thought since we're at an incredibly important point in the life of the Clean Water Act, that I would start out just by reading from the speech that Senator Ed Muskie delivered when he introduced the Clean Water Act on the Senate floor on November 2, 1971, which was 52 years ago. And we all know a year later, Nixon vetoed it, and the House Senate overrode it, and it became law November 18, 1972. But anyway, bear with me as I read a couple paragraphs.



This was the beginning of the speech: “This country once was famous for its rivers. In songs and poems and stories, Americans gloried in the now-quiet, now roaring reaches of the river waters. A vigorous people, following their rivers to the oceans and beyond, built along the riverbanks a strong and productive economy.

But today, the rivers of this country serve as little more than sewers to the seas. Wastes from cities and towns, from farms and forests, from mining and manufacturing, foul the streams, poison the estuaries, threaten the life of the ocean depths. The danger to health, the environmental damage, the economic loss can be anywhere.” And then he went on to list many examples of what “anywhere” meant.

Then, a little bit later, just one more paragraph: “The committee believes the country should move now to restore and maintain the natural, chemical, physical, and biological integrity of the Nation's waters.” Then, the speech went on for another 20 pages and laid out what was in the law.

So, the reason I'm very familiar with the speech is because my father wrote it. Richard Wilson was a staff member of the Senate Environment and Public Works Committee from 1968 to 1972, when they were writing the Clean Air Act and the Clean Water Act. And since today is Veterans Day, my father was a veteran, I thought I'd give an extra shout out to him and hope I can hold it together. But anyway, you know, he talked about the negotiation process and all these things when he would come home from work. And it was pretty fascinating, and as you can tell from my gray hair, I was old enough at the time to be able to understand what he was talking about.

But here we are, more than 50 years later, after a number of congressional reauthorizations of the Clean Water Act, and after countless court cases and lawsuits that have reshaped that original law, changing the interpretation, the implementation, and the enforcement of it. So, how are we doing today? How successful has it been? And what will this *Sackett* decision mean for the future of clean water for us humans, and the wildlife and the ecosystems that clean water sustains? You know, I do think most people agree we've made a lot of progress. Rivers aren't exactly sewers to the seas anymore, and rivers aren't burning. But that original act set a goal, I think, of 1985, for all waters to be fishable and swimmable, that clearly has not been met. I was doing a little web research last week, getting ready for this, and found a recent report from the Environmental Integrity Project where they had tried to describe, by looking at all the impaired waters that EPA has designated, what percentage of our waters were fishable and swimmable and what weren't. So, 51% of assessed river and stream miles remain impaired, so more than half. 55% of lake acreage and 26% of estuary miles are impaired. So, we have a ways to go, and then we have this Supreme Court decision which makes it that much harder to protect our clean water.

But one of the tools we have, and I'm finally getting around the land conservation, is to conserve land along streams to prevent pollution in the first place. It costs a lot less to buy land or an easement or even better, to receive a donation to protect land along stream or around wetlands than it does to clean up the pollution downstream after that damage has been done. I mentioned



earlier, I've lived in North Carolina about 20 years. I've been consistently impressed by the strong commitment to land conservation in this state, and in particular, land conservation for the purpose of protecting water quality. It's like it's in the state's DNA. Governors, legislatures, both parties--it's really impressive.

We have a number of programs that supply significant funding every year to buy land along streams, to protect buffers, to restore wetlands, to save wetlands. The Land and Water Fund got \$30,000,000 this year. The Parks and Recreation Trust Fund got \$30,000,000 this year. Most of this money goes to state parks, and a fair amount of it goes to local governments, and a lot of those projects have something to do with protecting land along the water or protecting lakes. And there's this amazing network of more than 20 local land trusts around the state who do incredible work getting that money and saving those places. Not to mention national groups like The Conservation Fund and the Nature Conservancy who also do incredible work. Even a few years ago, DOT was putting serious money into the ecosystem enhancement program in this state to preserve land along streams. So, there's just a lot of land conservation opportunities already.

I'm going to hold off on my answer to what *Sackett* means for land conservation and what land conservation can do in the wake of *Sackett*, other than to say it's too early to tell, obviously, and I will come back to that. But what is great news, I think for all of us, even though it's not news, is that we already have this infrastructure and significant funding in this state to fund land conservation for the purpose of protecting water quality. It is a great thing that a lot of other states do not have. We could always use more funding, but still, at least at this point, this state does a pretty good job of protecting land and protecting water quality.

Ken Bridle: Thank you, Reid. Carolyn how does *Sackett* affect the Blue Ridge Foundation?

Carolyn Ward: Well, I'm going to take a little bit of a different turn on that question because, prior to being asked to come set on this panel, I went, "*Sackett*? What? Pretty sure you don't want me here Stan, I'm pretty sure you asked the wrong person."

The Blue Ridge Parkway, as y'all probably know is the most visited National Park Unit in the whole country. It has more visitors than Yellowstone, Yosemite and the Grand Canyon combined. It attracts about 16 million visitors a year. Our organization has worked for 26 years trying to help raise money to bridge the gap between the funding from what it gets from the federal government and what it actually needs. There's a huge gap in that. If you've gone to the Parkway, you've seen the difference in the quality of the resource and the quality of the experience probably as well.

One of the things that we do is we try to think carefully about how we invest our money. What kind of projects do we fund and support? So, in terms of water and water quality, we fund research studies, what's going on with the water. We've funded studies to help save the remaining hemlocks that are protecting the watersheds and are getting wiped out; I think 95% are dead or dying and cannot be saved. But some of them can. And there's no tree in the



ecosystem that can replace the role of the hemlock shading the watersheds, which protect the trout habitats.

We've done projects with little bog turtles, trying to make sure they're protected and that we understand them, and crayfish studies. Then, we have land trusts that will come to us and say, "Can you help us with closing costs?"

Bill Holman: Thank you!

Carolyn Ward: Some things the governments won't fund to protect particular pieces of land. And so for us, historically, because, you know, the Blue Ridge Parkway is the most, one of the most biodiverse places in the temperate world, right? These are special mountains that we have that provide not just a learning laboratory for students and folks out there doing research, but it is the number one economic engine for Southwest Virginia and western North Carolina. It generates \$1.7 billion dollars of money into those little mountain towns. And I know we care about resource protection, right? I've done a survey of my donors and supporters every other year because I'm a researcher at heart. "What do you want me to spend your money on?" and every time the answer was, "Protect natural resources," until about four years ago, when the number one answer became advocacy. Because there was this realization that some of the things, we can't fix without some bigger policy-level shifts and changes and impacts.

And so we began to sort of widen our lens a little bit about what we're doing and how we're doing it. The Blue Ridge Parkway is a little strip of road, right? Sometimes the park is only a few yards on each side before you hit a neighbor. There are 4,700 adjacent neighbors, and it's about 90,000 acres and it runs through 29 counties and two states. But if you take the 29 counties that surround the Blue Ridge Parkway, they are about 9 million acres. What we know is that pollution doesn't know the park boundary, and the water doesn't know the park boundary, and the wildlife doesn't know it either. And so, to actually make a difference for the park, the thing that we want to have as a legacy and in perpetuity, so grandkids get to see it, you can't do that by just doing things in the park; it doesn't work that way.

So, the \$1.7 billion of economic impact comes from those 16 million visitors. And the number one reason they come, 96% of them, come for the views. And we'll see the views. The park doesn't own the views; you do. And so, historically, we've made decisions about what to fund in terms of land conservation based on the viewshed. Made perfect sense to me. I'm going to give money if it protects the viewshed, protects the economic benefit of the park, protects the resources--it's all good. Then I had this conversation about the *Sackett* decision and did a little digging, which I haven't done since grad school, on that level, so that was sort of fun. But 54 headwaters and watersheds are on the Parkway. 54, that's a lot. Asheville gets its drinking water from the headwaters on the Parkway. And so, some places are a little bit more resilient and proactive about protecting those headwaters in those watersheds, and some are not.

So, for me now when I think about where we're going to invest our money, we might have a matrix of things that we make decisions about which land we think is more or less valuable. Viewshed sure; watershed, now as well. And so, knowing, and we had this conversation before



this event, I think Stan asked me what the impact of *Sackett* was for me and what I think it might be for our constituents and our supporters. It does not exist right now because they don't know about it. I didn't know about it, and I'm not exactly living under a rock. So, when I think about the impact of a decision like this, listening to the first panel up here this morning, it's going to be tremendous, devastating. I haven't seen it on the news; I haven't heard about it from anyone. And it's sort of going to be, I'm worried that it'll be like the reason we got the Clean Water Act to start with. And you made me tear up with your story; that was super touching. Because we won't pass the new laws until the rivers are on fire again. Right. And so, people, we are the ones that can make a difference. We can make a difference with our pocketbook, with what we support, the phone calls we make, the votes we have. As a nonprofit, my direction comes from the people that call me up and give me money to tell me to go do X versus Y. Thank you.

Ken Bridle: Thank you. Bill, some sage comments at this point in your career?

Bill Holman: As your Senior Advisor? Yes, generally, I want to say that just from the perspective of the Clean Water Act, the Clean Air Act, these are some of the most successful things we've done as a country. We've made significant progress. If you look back when those laws were enacted, and then think of the population growth, the economic growth we've had, so in the face of enormous economic and population growth, the air is cleaner, and the water is cleaner than it was 50 years ago. That's pretty significant. Still, we have a lot of work to do, and we've got to address, we've got to be more serious about reducing greenhouse gas emissions. But I think it is worth noting when we apply ourselves, we get things done as a country.

When it comes to environmental policy, I think are three tools. There's the regulatory tool, which we talked about earlier this morning, and that's critical. There's just education, just making people aware so they can change behavior and also participate in our democracy accordingly. And then there are incentives; I think in this context, the incentives are the land conservation tools that Secretary Wilson talked about. As Secretary Wilson said, North Carolina has a good track record here. And this is something in our politics where there's a lot of partisanship, we still enjoy good bipartisan support, strong support from our governors, and strong support from the General Assembly. So, that's something I think we can continue to build on.

The tools we have are flexible. The state will fund the simple acquisition of property for new parks, greenways, trails, for wildlife management areas. But there are many landowners who don't want to sell these simple interests; they want to keep farming or practicing forestry or just enjoying their property, so conservation easements are also a tool. So, we've got a good setup I think, what landowners might be interested in.

As Secretary Wilson noted, we do have our primary tool, that's now called the North Carolina Land and Water Fund, which used to be called the Clean Water Management Trust Fund. Its history is that in 1995, the state experienced a massive fish kill on the Neuse River, and the public was unhappy about that, and they asked their political leaders to do something. Governor Hunt was in office then. We had this situation then, the Republicans controlled the North Carolina House, the Democrats controlled the North Carolina Senate. But again, everyone said we got to clean up the Neuse River. At that time, the Department really had primarily just



regulatory tools available. So, they started writing buffer rules and stormwater rules and animal waste rules and wastewater rules. After the hue and cry about the fish kills, then there was a hue and cry about the regulations. The good thing in that era is that the legislature still let the regulations move forward, but particularly Senator Marc Basnight, who was the leader of the Senate, recognized that we needed some incentives to clean up our rivers. And he had the foresight to think we not only need the incentives to help clean up places, but we ought to invest in places that are in good shape to keep them that way. And there's been some evolution. The Clean Water Management Trust Fund was merged by the legislature with the Natural Heritage Trust Fund. It picked up two missions, now has a water quality mission and a natural heritage mission, as well as it does some cultural resource work as well.

But I think, in light of the *Sackett* decision, it may be appropriate to ask the Land and Water Fund to look at its criteria and where we were assuming in the past that there's a group of wetlands and intermittent streams and floodplains that were protected, they may not be protected now. And we may need to tweak our point system so that the land conservation organizations that are bringing projects forward can start to fill in that gap of acquiring either easements or properties in fee to protect them. There's certainly precedent for using land conservation as a tool for water quality protection. The city of Raleigh has a watershed protection program that complements their regulatory programs to protect Falls Lake. As Edgar Miller noted, there's discussion underway about High Rock Lake and nutrient issues, and also in the Jordan Lake watershed.

In terms of how we respond to *Sackett*, that's I think one thing the state could take a look at. The previous panel also talked a lot about flooding. Of course, we're in a drought right now, so flooding is not top of mind. It looks like we're going to dodge another hurricane season without any serious blows to North Carolina. But just a few years ago we had two 500-year storms, Matthew and Florence. Again, that drove our legislature that disagrees over lots of things, into a bipartisan support of some resilience funding. I do think that is an issue that affects the local folks and state folks. The importance of those wetlands and floodplains in storing water, I like to think, becomes a factor in the way the Legislature thinks about what they just did this summer.

I should note this, I think Keith Larick mentioned earlier, that the Department of Environmental Quality is working on a flood blueprint, trying to come up with a model. Some of us have urged that, well, there's 2 million plus acres of wetlands that you had assumed were protected and could store water; you need to tweak--well not tweak, this is a big change in the model--you need to look at, well, what is the impact of converting that 2 million plus acres of wetlands into development or other uses that don't store water? And how does that affect the flooding issue in North Carolina? And can use that tool to help us identify what are the most--let's start with the most important--of those isolated wetlands and other streams? So, the land conservation community can get to work trying to figure out how we can protect them. Hopefully, maybe Secretary Biser will have some thoughts on that later this afternoon.

So, a few other things I think are important to us. There is still an Endangered Species Act in the Southeastern United States. A lot of our endangered species are water dependent; they're



reptiles, they're amphibians, they're birds. I think one of the things, again, the Legislature didn't fully appreciate earlier this year, is that if you take away all that habitat for those endangered species, you can tend to create conflicts you don't have currently, where there's habitat for those species they're doing okay. But if you destroy their habitat, then you develop more listings, more conflicts over development, and other things. Again, I appreciate Keith Larick's comments this morning about the Farm Bill programs. Another tool that we've used well in North Carolina is the Natural Resource Conservation Service, which has a wetland and a flood plain protection easement program. That's been really a great incentive for a lot of private landowners to basically get paid to protect those habitats and provide the water quality and wildlife benefits. I don't know what impact *Sackett* will have on those kinds of programs going forward, but I think it would be important for us to figure out to keep using those tools to protect wetlands.

I just have one more thought. About 20 years ago, my former boss, Governor Hunt, set a goal of protecting 1 million acres over the next ten years. He set that goal in 1999. We actually made it, but it took us 20 years. That was really a concerted effort. We have, again, a great network of land conservation organizations and state agencies that work together. We're going to say, try to protect 2 million acres of what used to be protected wetlands. We really have to step up the pace and investment in conservation to achieve that goal. Thanks.

Ken Bridle: Thanks, Bill. As someone who has worked for the Land Conservancy for 30 years, when I first heard of *Sackett*, I was in the same boat as Carolyn, and I said, "I'm not really sure what that is or how it affects us because we don't protect wetlands based on whether they're jurisdictional or not; we protect them based on their conservation value."

And some of our largest wetland conservation easements were from the mitigation banking industry, where they come in and do a mitigation or stream and wetland restoration project of some sort. They get their mitigation credit, and then they agreed to give us some stewardship money, and then they roll the conservation easement over to our monitoring.

How do you think that affects the *Sackett* decision, affects the mitigation banking industry, if there still is one, at this point?

Bill Holman: I don't think they're harmed because they depend upon a strong regulatory program to generate the demand to sell the credits, so they could be potential allies. And also, I'll say, I mean, for these kind of flood resilience issues, we need to do a lot of floodplain and wetland restoration, not only protection but restoration. And we need that industry to stay healthy because they're the ones with a lot of the expertise on how to actually restore those, those areas and get them to function.

Ken Bridle: Right, ten years ago, the plan was that mitigation should be on the ground for streams and wetlands before the beltway is built, that impact. And we're still building beltways and roads like crazy. And, at least in this area, I haven't heard or seen so much of large mitigation activities happening, especially with the expansion of the airport and the runways over at the airport. There were a lot of wetlands impacted there, and I don't know if all of those have been mitigated, but it seems like that whole industry has slowed down at some point.



Bill Holman: Just a thought is, the principal driver for this change of the State Legislature was not the Farm Bureau but was the home builders. And really, what's going on is another cost shift. Homebuilders could destroy wetlands, but had to go through a permitting process, and they had to pay to mitigate the impacts. Basically, what's happening here is the developers don't have to pay that anymore. And the impacts then are going to get shifted onto the folks living downstream or the folks who move into the new neighborhood, who bought property in a former flood plain or wetland, then they're at a higher risk of flooding.

Ken Bridle: I think that we also want to remind everyone that we do have little 3-by-5 note cards. So, if anybody has questions from the audience, you can send them up, and I'll curate those and ask some questions.

Reid Wilson: I want to go back to what I think some of the options are, and Bill has mentioned some of them. But when I came in earlier during the first panel, there was a discussion about mapping and how, "Yeah, let's get it all mapped, wait, that's not so easy." But I do think that maybe we don't need exact mapping of where every little formerly jurisdictional wetland is that isn't anymore or where every intermittent stream is. Maybe what we need to know is roughly where these areas are. I believe that most of the Land Trusts and National Conservation Organizations in the state probably have a pretty decent idea about that already because they've been talking to landowners for decades in whatever counties they're active in. Piedmont Land Conservancy is phenomenal. I think they have at least a good idea about where these places are. They could maybe shift a bit of their prioritization in their conservation planning documents to try and do more of these things. As could others, and our department's natural heritage program also has a lot of data about all sorts of things natural all across the state.

But I also think that an option, as Bill mentioned, is for the Land and Water Fund, part of our department, to discuss at least revising our funding criteria. I think it's a 100-point system, and when a project is applied for, our staff very thoroughly reviews that application, visits the site, scores all these things on whatever scale it is for each element that's being evaluated. Some things are worth five points, and if you're great at that one, you get five points, and if your property doesn't have anything related to that criterion, well, you get zero points for that. And the Board of the Land and Water Fund then gets this report from the staff that lists, in order of rank score, all the projects. And there are a lot of projects. So, an option could be to try and add points to something that would help identify and protect these areas that no longer have protection under the Clean Water Act. So, I imagine our folks will want to look at that; I haven't actually talked to them about it. And it's one of those things where there is a board of nine people, five appointed by the Governor, two by Senate leader, two by the House Speaker. And they're the ones who will decide in the end.

Then the other option, this is always Bill Holman's favorite option, just get a whole lot more money out of the Legislature for these successful programs that are already working in the Land and Water Fund, the Parks and Recreation Trust Fund, and others. Because you're just going to be protecting more of these areas; it's inevitable if you have more funding to do that. And when Bill was Executive Director of the Clean Water Management Trust Fund, they were getting \$100



million a year. Now, some of that was for wastewater projects, and those have been peeled off, but there was more money back then to protect water by protecting land. And you know that land prices back then were way lower than they are today, so the dollars don't go as far, so we have less money, and it costs more. I think there are great arguments to be made to the Legislature to pump up the funding in these programs. And we all know there's a huge surplus in the state budget. They could allocate millions to these funds, which would help protect more of these lands that are so important to our clean water.

Carolyn Ward: Yeah, I think education is key as well. Right? There's a lot of groups like mine, others around the state, that, were they to be aware of, there is power to that advocacy voice, that is a collective that you could build. Because even though it's tangential for my center line, it's still really, really important.

Reid Wilson: When you said something about 54 watersheds, how many millions of people drink that water?

Carolyn Ward: Yeah, exactly.

Reid Wilson: I mean, tens of millions.

Ken Bridle: A couple of years ago, I was at a benthic macroinvertebrate conference in Hot Springs, and we noticed that a bunch of people from the breweries around Asheville all came to this benthic macroinvertebrate conference, and they all knew tremendous amounts about water quality because it's their raw material. And I was asking them, why Asheville? You know, Asheville is a party town and a place where tourists go and there's a reason. But one of the reasons they were all putting a new business there like Sierra Nevada was because the water quality that came out of the Vent Creek watershed was just exactly what they needed. They don't really like Edgar's Yadkin River water. That water has come through a long process of cleaning and filtering and whatever, the brewers don't like that; they like the natural water that comes out of the Vent Creek watershed, which is where Asheville gets their water from. I thought that was really an interesting insight that all of these brewers, quality control guys, knew a lot about caddisflies, mayflies, and stoneflies, and all sorts of other interesting things about water quality.

Someone has asked, "Bill spoke about the Land and Water Fund giving more consideration to wetlands. Would it be important enough to establish a new or separate fund for wetlands specifically?" Anyone, or everyone?

Bill Holman: Yeah, personal opinion. So, you know, one of the things that the land conservation organizations like mine and Piedmont Land Conservancy do is negotiate with the landowner, find a reasonable price, and get a reasonable set up. What do they want? Do they want to just sell the property, do they want to have an easement? And then go find funding for it. Usually, there's multiple funding sources, which it is great to have multiple funding sources, but it also makes it much more complex to actually execute the deal.



So, my recommendation would be, we've got a very effective Land and Water Fund program. As Reid mentioned, in its past life, it was investing \$100 million a year; it now has about \$30 million a year. I think it would be more efficient to just expand their mission and give them the resources to implement. You know, the Legislature gave it just kind of a pilot last session, \$15 million for flood risk reduction projects. And they quickly ramped up, created a new program, new criteria, and funded \$15 million worth of flood reduction projects. I think they could quickly respond too if there's interest in a new funding stream, say for wetland protection, that they could take that on, and therefore, it would be well-coordinated with the state's other land conservation programs.

Reid Wilson: I would just say, since I worked for the governor, that in his budget proposal, he proposed additional funding for this flood risk mitigation program. But the legislature, though it had funded it the previous year, did not provide any funding in the current year. Just so you know, but we will ask again.

Bill Holman: Thank you.

Ken Bridle: One of the things I think about in the land conservation is that more recently, it is recreation, blueways, greenways, and hiking trails and stuff. And especially in urban areas, most of those are along floodplain corridors and other places where the urban people haven't already built something. And it's surprising to me how many wetlands you can find in an urban area if you just step a few feet off a greenway into the thicket of probably invasive stuff that's growing there, but there's a wetland back in there. I think the same is true for the blueways.

In this area, we've got the Dan River, we've got the Yadkin River, we've got the Deep River. So, all of those that have blueway corridors where you're trying to think about canoeing and kayaking, there's also interest in putting hiking trails along the edges. And there's a section along the Yadkin that Edgar and I know about where there's a railroad track, there's a strip of land that's hardly usable for the farmers, but then there's the river, and that's a great place to think about. And there are lots of little wetlands in there, partially because of the way the railroad has historically impacted water drainage and stuff.

So, I think the blueways and the greenways and recreational interest now in getting people out into places gives us more reason to put people near where wetlands are in the world.

Reid Wilson: And this is the Year of the Trail officially in North Carolina, so get out there!

Carolyn Ward: I think what you just said is one of the key things that I feel like we always miss. It's like burying the lede. I can get someone excited about natural resource protection, sure, but that conversation takes longer. But if I can talk to you about how whatever impacts your bottom line and your ability to pay your staff or your ability to make a profit, I get your attention a lot quicker. And so in western North Carolina, they have this outdoor recreation economy and it's like, "Oh, we're going to bring 1 million people here and 1 million businesses, and a ton of kayakers and fly fishermen and all this kind of stuff," but they don't think about what that does to the quality of the resource.



So, we're working at the Foundation on this concept of Blue Ridge Rising, which is, you cannot pull one of those pieces apart because they all impact each other. If you want to increase the economy, the recreation economy, you better be thinking about carrying capacity and how many people are too many people on that river, how many people are too many people on that trail? And I think one of the things that could be an ally we might not think of are the businesses and all the people whose economic bottom line depends upon a clean river and good fly fishing and kayaking. And it's not just the recreationists; it's all the businesses that are building the kayaks and making the shoes; there are alliances. And when I start thinking about getting someone's attention for a policy or a shift, it's often not the cute little caddisflies. It's the bottom line of how it impacts the economy and their community, and those are allies I think for this kind of issue, whether it's requesting more money from the state to create a special fund, or it's just additional people out there to help make a difference, those are people we need to pull in close to us.

Ken Bridle: One of the questions that came from the audience was, "Some wetlands are important for groundwater recharge; we don't have any regulatory system to protect recharge. Is there any realistic way for land conservation to do that?" That's one of the things I, in the engineering part of my life, we did a little bit of groundwater monitoring around like landfill sites and whatever, but it's amazing how little we know about groundwater in this area. I think 30 years ago, when High Point built their brand-new, big furniture market, they sunk so many wells in the ground to run their evaporative coolers, they put a bunch of the neighborhood out of business because they lowered the water below the wells. And I think we don't monitor wells and groundwater. And when it comes to things like bog turtles, those are groundwater-dominated systems. I often think about what happens when the ground water disappears or declines. Is there any regulatory way that we monitor or can help fund interesting things that let us know more about groundwater?

Bill Holman: Yes, the numbers may have changed a little bit, but about half the people in our state drink ground water and they rely on ground water.

Ken Bridle: Right here.

Bill Holman: Yes, people living in Stokes County, for example. For surface water we have a watershed protection program, we have surface water protection plans, but we don't have a comparable effort to protect ground water resources. And of course, we do have some deep aquifers in the coastal plain, but most of the surface water in the mountains and the Piedmont is ground water dependent. So, I think that we need some more science and some more mapping that could inform what are the critical places that ought to be protected to make sure that the ground water supply is available.

And the other thing we're doing, as we pave over a lot of the state, the rain can't reach the ground; it's running off more rapidly, so we're aggravating our storm water challenges, at the same time we're depriving the ground water of the ability to recharge. That'll be a growing problem. That's just another place we really need to get the legislature to revisit. They're thinking about minimalist approaches to storm water because we're wasting a future resource we're going to need. Stan can organize, that could be next year's panel.



Ken Bridle: I served for about 20 years on the Wildlife Resources Commission Non-Game Advisory Committee, and that's the committee that lists animal species. At one time, we had some documentation that there's isopods that live in ground water and only come up when well drillers bring them up. And they're apparently rare enough, or at least we don't know enough about them, that they were considered for listing at one time. But the well drillers' lobby shot that down in a heartbeat because they didn't want to have to be responsible for whatever regulations would happen for them inadvertently running into an isopod underground when they're drilling somebody's well.

And the Wildlife Commission has had a lot of consideration given to what are the impacts of listing species and how that would affect people. Most people think it's much more egregious to the public to list species. We always had to make the discussion that the reason we're listing is because they're rare, so we're not going to find them in your yard. And that's what most people think, if you list something, it's going to be rare and it's going to be in their yard and they're going to have to do something about it.

There was a question about whether Wake Forest and other universities, which have a lot of science for mapping, for aerial surveys from drones and things, are using any of that kind of science for mapping of wetlands and these sorts of resources?

Bill Holman: I mean, yes, I do want to note this flood print underway by the Department Environmental Quality, that is a huge mapping and modeling exercise. We have some tools now that inform conservation priorities. You can't protect everything; you've got to prioritize. But it's a dynamic process. There's a lot of potential work for undergraduate and graduate students to figure out how to apply a lot of this technology. Technology is usually way ahead of the policy making.

Reid Wilson: We've been having discussions between different parts of our department, namely Parks, Natural Heritage Program, Land and Water Fund with the Nicholas School of the Environment at Duke, to try and tackle some of these mapping issues, but not just for purposes of water quality, also to get to your point about recreation, to identify the places in the state where communities don't have access to outdoor recreation, where they don't have park trails or greenways. Usually, underserved communities, often these communities also bear the disproportionate burden of pollution in their neighborhoods. And so, we are trying to identify these sort of park deserts so that we can think about whether our Parks and Recreation Trust Funds should adjust some of its criteria to help those communities be better able to just have the capacity to apply for a grant and to succeed when they apply for the grant, and to have the funding to maintain that recreational asset once it's been established. So, the question is about universities, we're actually working with Duke on something that would help us figure out the water piece and the parks piece.

Carolyn Ward: And data, I mean, data matters, right? That's the most important thing to make a good decision. Without good quality data we're all just sort of throwing a dart at the board about what to protect or where to spend our resources, and it would seem like a great opportunity for



both increasing the educational value for students doing something that's meaningful. But it would take funding of some sort to fund this kind of research.

Ken Bridle: It's interesting, often, what sort of data is missing. The Piedmont Triad COG and the Land Conservancy have worked on some impaired stream surveys. And we basically put on waders and walked down a stream somewhere that starts usually in an urban area and goes out into some rural area. And we found places like an entire four blocks of Burlington that was never connected to the public sewer system because it was in the mismatch between two paper maps when they were actually building the sewer system. So, it's very interesting to find older data that people are still relying on, that is, paper maps in somebody's office that have not been updated. So, it doesn't surprise me that much, when I tell, when I work with students, most of the time it's, if you're going to do a mapping program, you've got to get out in the field and ground-truth it because you never have any confidence that the meta data that you're dealing with is reliable.

Carolyn Ward: It's garbage in, garbage out, right? Data is expensive. I mean, having done that for years and years. A very small study we funded at the Parkway about bats, right, nighttime pollinators, and how light pollution and all this kind of stuff, it was \$90,000 okay? One season of a bat study, a crayfish study, and one segment on a creek was like \$75,000. If you want good data, right, reliable valid data, it costs money. But then, how many years' worth of decisions can be based on good quality data? I mean, it's enormously valuable, but it does take investment.

Ken Bridle: 20 years ago, when I did the Forsyth County Natural Heritage Inventory, we found lots of little wetlands around, some of which had nice populations of salamanders and beneficial critters, other things in them. We've gone back and looked at some of those now, 20 years later, and it's surprising to me that even though the wetlands still look okay, the species are gone. And I don't entirely know if that's due to pollution, climate change, or certainly the chytrid disease that the frogs get; that's part of the problem. But we have wetlands that are still wetlands by definition of hydrology, plants, and soils, but are not biologically diverse places any more.

If you do biological inventories in the Piedmont, most of your biological diversity is where the water is; it is not on the oak-hickory south-facing hillside full of dry forest; it's down where the water is. It's discouraging to me, and we are in the process of trying to think about updating a lot of those biological inventories that we've done 20 years ago. That's just something that we need to be thinking about: they're not functioning with diversity that they used to be functioning with. I'm sure they were functioning even more 20 years before I even looked at them because we had records of people, you know, there used to be records of bog turtles in this county. This is the farther south and east that bog turtles went. We think there was one remaining bog turtle site on the south side of Winston Salem, but then that turned into a DOT mitigation site, and DOT built a dam and flooded them out. So, we're not really sure if they're even here, but apparently, 50 years ago, there were ten or twelve bog turtle sites in Forsyth County.

Unless we have any other questions, I think we're winding down here. Any other comments from the panel members?



Bill Holman: Well, we've got some challenges, but don't be discouraged, you've just got to keep working at it.

Carolyn Ward: I mean, I think the fact that you're sitting here on a Friday listening to this makes me feel good that we have a chance of making a difference, whether it's a policy difference or the actions you take every day.

Ken Bridle: I want to thank all the panel members who are busy people and I want to give them a round of applause for being here.

Stan Meiburg: Ken, we can't thank you enough for moderating that session. And again, thanks to all members of the panel.

What I took away from this, and it ties into the first panel, is that whatever *Sackett* is, there are many tools that we have at our disposal to help do a better job of protecting clean water, whether it's farm bills or conservation incentives, acquisition funding in the Water Conservation Fund, conservation easements, or the Endangered Species Act. It also poses some interesting questions. For example, I was thinking about wetlands mitigation banks. One of the virtues of mitigation banks is that they can be used to protect more highly functioning ecosystems by consolidating these things rather than protecting every individual puddle. That was a happy benefit of the requirement to do mitigation work. I worry, in the wake of *Sackett*, that some of the feedstocks for those mitigation banks are going to dry up. So, that's a real concern, and we'll have to think about some other funding mechanism so that we can preserve some of the mitigation bank areas and ecosystems. But there are more tools, not just the regulatory tools, and I think this panel did a great job of laying those out. So, thank you all very, very much.