

## Talk of the Towns

# A voice for the lake

**Publisher Tom Woodman** talks with community leaders around the Adirondack Park.

An interview with **Chris Navitsky**  
**Lake George Waterkeeper**

**C**HRIS NAVITSKY has been Lake George Waterkeeper since the Fund for Lake George established the program in 2002. As part of the International Waterkeeper Alliance, Navitsky acts as an advocate for the lake's water quality, monitoring conditions of the lake and its tributaries, taking positions on development proposals, and promoting low-impact development. Prior to becoming waterkeeper he was a consulting engineer specializing in land-development and permitting issues.

**Waterkeeper is a cool title. What does it mean?**

The attorney in Bolton described it when I went to my first planning board meetings there and the chairman asked, "What's a waterkeeper?" And the attorney said, "Basically someone who has a big bladder and can sit through all these meetings."

The waterkeeper is part of the Waterkeeper Alliance, which was started along the Hudson River as the riverkeeper. We are there to speak for the water. The water cannot speak. It gives us signals and it gives us signs that it's being impacted or its quality is changing, but it's not able to go to public hearings or write letters. So we are there to work with the water body, to investigate it, and to protect it.

**How is the lake doing?**

The lake is still an incredible body of water, one of the best in New York State and the Northeast. There is a slow trend we're seeing from the south basin to the north where water quality is being impacted. It's a slow process. It's a big body of water so you don't see it instantaneously. But we're seeing through some of the research that the Fund has collected with [the Durrin Fresh Water Institute] the development of a dead zone in the south end of the lake in the deepest portions where storm-water runoff will bring higher levels of nutrients. Nutrients spur increased algae growth, increased plankton growth. Those plankton and algae drop to the bottom of the lake, get digested by bacteria which draw oxygen out of the water. Oxygen drops to levels that cannot support the cold-water fish.

**How large is the dead zone?**

It's an area several hundred yards long and wide in what they call the Caldwell Basin off of Tea Island. One of the projects that the Fund has is to determine what the exact size is and see if it is growing.

**Are the fish going to a different part of the lake?**

Yes. There are other deep zones. Basically, the way the underwater topography is, there are five deep basins in the lake: Tea Island, Dome Island, The Narrows, Up near Sabbath Day Point, and then up near Rogers Rock at the northern end. That's where you get the lake trout and the landlocked salmon in the warmer months.



Chris Navitsky paddles the waters he's charged with protecting.

Photo by Gerry Larrino

**Is the dead zone in the Caldwell Basin the only one that you are aware of?**

Yes.

**But you're worried that this will happen elsewhere?**

That's part of the analysis that the Fund is going through. There's clearly a difference when you're going from south to north. The Fund has done eight deep-water studies over thirty years, and you see the water clarity less in the south end and more in the north. The south end has more sediments in the water. There's more algae and plankton so it decreases the depth that you see. There's also a higher level of nutrients in the south end, compared to the north. We're concerned about that trend moving north up the lake to the next basin, to the Dome Island area.

**The reason for this is the more concentrated development in the south end?**

Yes. A study done in 2001 of phosphorous in the lake showed 83 percent of the phosphorous comes from surface waters and runoff. And 43 percent of that phosphorous comes from the 5 percent of the area that's developed within the Lake George watershed. More nutrient runoff is tied to where the developed areas are.

**Phosphorous is a nutrient that promotes growth?**

Yes.

**What creates it?**

It occurs naturally through atmospheric deposition but

also through human creation, [such as] the use of fertilizers. As we alter the landscape—as we clear, as we grade and build we are taking up the natural nutrient-removal process. We alter hydrology so that water will run faster and have less chance to infiltrate and be taken up by plants; therefore it has a higher chance of getting to the lake. Nutrients also come from wastewater-treatment facilities, sewage plants, and septic systems if they're not maintained right. There's a high level of human influence.

**Any other signs of ill health or damage to the lake?**

We're seeing a higher level of algae. You know people have a lot of theories and opinions about the lake. It's hard to get anyone to agree on one. But one of them is that there's been more algae growth. People pull their boats out, there's more algae on them. There's more algae on the docks than what they experienced twenty years ago. So we've gone out and visited algae blooms. They range from limited spots in front of particular locations or around docks to entire bays where we've seen six inches of algae washing up on some beaches. It's fairly stunning.

**Do you see mercury?**

The Dome Island Committee, which oversees Dome Island, has started some studies comparing spiders that were along the shoreline to spiders that were inland. There appeared to be a higher level of mercury with spiders along the shoreline but nothing conclusive. To my knowledge there's not a lot of information about mercury. We are concerned, but we just don't have the documentation. The [Department of Environmental Conservation] appears to have stepped back from testing of fish for mercury, and there is no solid data since the late 1980s. There's a big gap there, and the DEC has not really pursued that.

**Is acid rain an issue for the lake?**

Lake George has not experienced the drastic effects that other lakes in the Adirondacks have for a couple of reasons. We're on the eastern end [of the Adirondack Park] so a lot of the [acid in] rain falls out by the time it gets here. And also the bedrock geology tends to be a little more carbonate, so it can neutralize acid. Studies show the lake to be neutral, maybe a little basic [non-acidic]. ▶▶

**"We are there to speak for the water. The water cannot speak. It gives us signals and it gives us signs."**

#### ▶▶ What about invasive species?

It's a very big issue. Eurasian watermilfoil is probably the most-known invasive, and that was found in 1985. The Lake George Park Commission has a program that's been going on probably twenty-five years of hand-harvesting and benthic mats. There are over 140, 150 sites of milfoil that have been located in Lake George. Last fall the Fund took on a more concentrated approach with divers and picked over two hundred thousand plants over a seven-week period and took out tons of milfoil. It's an ongoing process. It's something that you'll never really solve.

#### It's all over the lake?

Yes. All around. It's in what they call the littoral zone, which is about twenty-five feet in depth and less. So that reduces the area of the lake where it will grow, but it's still a substantial area.

Also, there have been about nine known sites of zebra-mussel proliferation in the lake. Lake George is bordering on a calcium level, just below the level that zebra mussels need to develop from larvae to adult. But there are areas where there are higher levels of calcium, and that's where they've been found. They were first found just off King Neptune's Pub in Lake George Village in the late nineties. Divers went out there and hand-picked over the next decade more than twenty-ton thousands zebra mussels. They really knocked that back and controlled it to the point where they'll go out and revisit that site almost quarterly and find less than a hundred. That's where they built the concrete boardwalk along the lake. Concrete leeches calcium so we created that little micro-environment. Mossy Point, the only free boat launch on Lake George, is up close to Triconderoga so you get an interesting change from Lake Champlain. There's the opportunity for zebra mussels to come in and attach there. We find it's really a human influence that's creating these micro-environments.

#### Are the mussels more prevalent on Lake Champlain?

Oh yes, to the point where they clog water intakes and become a hazard if you're walking [in the water]. We haven't tracked that level.

#### The AVA approved chemical treatment for milfoil in Lake Luzerne (see Page 33). Do you foresee anything like that in Lake George?

I don't see that happening anytime soon. Lake Luzerne is a lot smaller lake. They were trying this in an isolated area. I'm not sure how effective that would be on Lake George, which is so much bigger and has so much more boat traffic.

#### From what you've been describing, there seems to be a clear connection between damage to the lake and development. Can development coexist with the lake?

Oh yeah. We've been working on a program which is not a new concept. It's discussed all around the country. There are different terminologies for it: low-impact development, green development, eco-designs. It's development where you try to maintain the natural flow of water through a site. You can still develop your site, but you've got to be more conscious of what the footprint is. Basically, build your building to the land. Don't alter the land to fit your building. Take a look where your important soil and vegetation are and try to retain those. Soils are very important for storm-water management to filter surface runoff. People say, "Well, we planted grass and put vegetation back." But they've completely changed what the natural cycle was there, what the vegetation was, what the soils were. You still get high runoff's even though you've put grass there. Try to keep those natural depressions where water pools and filters in. Build the building better. Instead of having your roof gutters come down into pipe right onto your driveway and out onto the road, pipe those into the natural depressed areas. If you do disturb the depressed areas when you're building, let's try to create rain gardens that will allow vegetation to take up the water.

#### Can you point to an example of these guidelines being used?

We're actually working with a couple projects. We've worked with an individual who was retrofitting a house in the Queensbury area. Where they used to have storm-water pipes from their site and their driveway, they're now retrofitting that and running water through a filter and then a series of rain gardens.

#### How many homeowners would have to do that for it to really make an impact on the lake?

Starting with one, it's going to have an impact. We always say that it's a cumulative impact. We think that once people learn how effective low-impact techniques are, that they're not expensive, and that they will maintain property in an aesthetically pleasing way while taking care of water quality, we think that's going to catch on. I'm not talking techniques that are going to require large structures. We're really talking about allowing the soils to do the work, allowing plants to do the work. It's a concept that people aren't familiar with, from contractors to engineers to planning boards.

#### You're asking the planning boards to include these as a condition?

Conditions for approval, yes.

#### Has that happened?

Oh yeah. We've had some success in the town of Queensbury, where they've changed their ordinances and actually require shoreline buffers and no application of chemicals within fifty feet of Lake George. All the way up to the north end, to the town of Putnam, where they hand out our fact sheets and they are saying that we need to do more to protect against runoff. The town of Lake



Courtesy of the Fund for Lake George

LARGE IMPACT Intensive development creates impermeable surfaces, reduces natural filtration, and degrades lake-water quality.

EXTENSIVE IMPACT

George [voted to ban] phosphorous fertilizers everywhere in the town. We've reached out to some developers and their engineers and have sat down to try to implement these techniques in larger developments. They won't lose units. They'll knock down their costs for development and that's been proven through numerous studies around the country.

**How do they knock down the costs?**

Part of low-impact development is to reduce your impervious coverage so you're going to be paving less. You also tend to cluster things more so you reduce your road length. We also don't want pipes. Old-school engineering says you put in your curbs, your catch basins, and your pipe. And they treated storm water as a waste product. The new school of thought is that it's not a waste. It's a resource. Let's not pipe it out of here. Instead of putting in pipes you put in open gutters so that water flows along the roadside and you can put in rain gardens, which will allow the rainwater to filter in, recharging your groundwater, and it becomes a resource instead of a waste. Therefore you're not spending your money on pipes and on concrete catch basins.

**Would you also limit where new development can be?**

Oh yes, absolutely. That's an important part of low-impact development. Your first step when you evaluate a site, look at what your resources are. You want to use natural buffer areas [of vegetation] along a stream to protect the water quality. You allow the water to filter through the buffer, to go over the humps and hollows and rocks, and to infiltrate, deep sediments out. And you protect the stream through a canopy. You want to stay away from steep slopes where your disturbance becomes bigger. As you grade on a steep slope it takes a wider area because you're eroding and benching and you have to build retaining walls and stuff like that. So if you stay out steep slopes you reduce what your footprint is. And that reduces costs because you don't have to revegetate or grade as much.

**Are you saying in order to do this some land cannot be developed?**

People may lose spots that they wanted to develop, but what we're saying is that if you have a hundred acres and you have five-acre zoning, you're allowed twenty units. Don't spread those twenty units over all one hundred acres. You can still have the same number of units, but those twenty units may be concentrated in forty acres of the area instead of spreading them out over the entire hundred. That will again reduce your costs.

**Do current laws allow for that?**

Oh yeah. There's cluster development.

**So you don't see a need to change laws so much as change the thinking by planning boards.**

The laws for the most part are effective around Lake George. The laws are there. We just feel that a lot of times they aren't being properly applied. That even came about last evening. We requested the approval of a project in the town of Bolton where they wanted to put three homes on top of what they call the Pinnacle. This is going to require a nearly one-mile road that would clear eight acres for the road alone going up top. The town code says that the clearing for a driveway, and they claim this to be a driveway, not a road, cannot exceed sixteen feet, and they were clearing up to 170 feet, 200 feet in width for this driveway up the mountain. Two-hundred-foot clearing at 40 percent slope. This needs a variance. And the town denied our appeal last night. Our whole concept is you can have three homes, four on the mountain and you don't need to disturb all this. You still get three homes. You still have access to the top; you just won't be building your home up there.

**As waterkeeper, is your concern about this project limited to its impact on the water quality of the lake or do you look at things like the character of the land-**



Montcalm Point (in middle ground) is where the tip of Tongue Mountain meets Lake George.

Photo by Carl Heitman II



Photo by Garry Larro

**Testing the water of English Brook.**

scape and whether you are detracting from a wilderness experience by putting these homes along a ridge? We feel that everything is intertwined. The amount of disturbance on a hillside does have a visual impact, and it's a scar on the community. But we do tend to focus on water-quality issues. That's what our mission is.

**From time to time you've become a lightning rod because of positions you've taken. Is that inevitable? Is conflict a part of your job?**

I don't know if *conflict* is the word. There are conflicting views, obviously. I've had residents say, "You're here representing the people who have their land, and to prevent others from getting theirs." That simply isn't true. People view us as anti-development. We support development; we just feel it needs to be done in a better way in protected Lake George and the Adirondack Park.

**On a personal level, you're working and living in a small community so anybody that you might have a conflicting view with you're likely to see in the grocery store or gas station. Does that make it difficult for you?**

No. It might make it difficult for my wife sometimes when we go out to get dinner and sometimes I've got to talk shop. People are coming up to say, "I know you're here for dinner, but this project's going on, what are they

doing?" It makes it difficult that you can't separate yourself from your work sometimes. But all the stars we make as waterkeeper, I'm comfortable with. It's a bit difficult. People will laugh at you or mock you. You can see them talking when you come into a room, or they'll stop talking when you come in. I know what we're doing is right and that's what the law is. I'm not concerned. What we're doing, we feel, is for the community, people's property and property value. If Lake George goes down, if the water quality goes down, people would stop coming to the hotels. People would not be going out and camping on the islands and hiking the mountains to see the vistas if they're looking at homes and patchworked hillside. That's not what they're coming for. They're coming to get that experience of clear water where you can jump in and see the bottom twenty-five feet down.

**What are you proud of?**

We've had accomplishments since we've been here. We think that the level of review at the planning boards has increased. I remember one of the very first meetings I ever went to, they'd come in with their storm-water reports that are an inch thick and they'd drop them off. And the planning board members are all volunteers and they're not engineers. So they see that, and they're like, "OK, you did it." But you have an inch-thick report; there are probably only four pages that matter in all that. And this first report I went in and I said, "So this won't work because of this and this and this." And they said, "Who are you?" So I think through that education planning boards are looking at things a little bit better. And we have a hammer. We've brought some lawsuits.

Another big one is the stream-reassessment project. We've been out monitoring over sixty streams in the Lake George watershed and developing data on them. That raised the credibility of the waterkeeper, showed that our decisions are based on science, and that has stimulated some of the stream-catchment regulations that have been proposed.

**What do you think the lake will be like twenty years from now?**

I think there will be greater pressures, but I think that those pressures are going to be offset by people who have learned to develop respect and have learned more about the lake. It's going to become a bedrock community. I think, as the area develops between Albany and Saratoga, people are going to drive forty minutes or an hour. We're always going to have tourism on the lake. But I think there's going to be a bit more pressure for living here. Another big change, I think, is people are going to be willing to travel to the north end of the lake. They're going to be willing to drive over Tongue Mountain and develop in Hague. ■