

# Great Bay Coastal Watch team flagged red tide

By Mike Sullivan , Portsmouth Herald, Aug 12, 2005

Candace Dolan knows all too well the value of good people. As the coordinator of the phytoplankton monitoring program for Great Bay Coastal Watch, she depends on 80 volunteers to help her monitor our coastal waters for toxic algal blooms.

This spring, Dolan and her band of merry water testers discovered such an algal bloom, more popularly known as red tide, which made its way into some shellfish beds in our coastal waters this spring.

OK, technically, it didn't.

One of Dolan's pet peeves, one she is hesitantly beginning to accept, is the use of the term red tide. While a harmful algal bloom did infect our coastal waters in the spring, it wasn't actually red tide. When red tide occurs, the water literally will turn red, which didn't happen. But, Dolan said, the term has taken on a false meaning of sorts.



Great Bay Coastal Watch volunteer and Newmarket resident Johanna "Hanna" Hock conducts a water test in the University of New Hampshire Coastal Marine Laboratory in New Castle on Wednesday.

Mike Sullivan photo

"We don't usually see phytoplankton in large enough quantities to change the water color, but they are still highly toxic

cells that can be harmful to shellfish," Dolan said.

So for our purposes, we'll just say red tide because that's how most people understand it.

Regardless of terminology, the discovery was devastating to shellfishermen but in many ways validated the efforts the Coastal Watch team puts forth every week.

"When we find something, it's exciting for us, but it has a negative impact on shellfisheries," Dolan said. "But we have the safest seafood anywhere in the world because we conduct such stringent testing. This is science that really matters."

The "we" Dolan refers to are the volunteers. Some are actual scientists, some are retirees who always wanted to be scientists but never were, and some are home-schooled children who may someday aspire to be scientists.

"I have always been a scientist at heart," said Great Bay Coastal Watch member Johanna "Hanna" Hock of Newmarket. "This gives me a high. Otherwise, I would smoke."

Hock and the other volunteers monitor testing sites around the Seacoast including in Hampton, Seabrook, Rye and off Star Island, as well as the waters at the University of New Hampshire Coastal Marine Laboratory in New Castle. That is where water samples taken by the group are brought. Dolan said the lab is often referred to as a well-kept secret, as it is nestled away at the U.S. Coast Guard Station.

After collecting a series of water samples, Dolan and the volunteers make slides and examine them under the microscope, checking on water quality and other things including phytoplankton.

"It's like putting together a puzzle," Dolan said. "We collect all this information hoping it can be useful to scientists. We identify if there are toxic levels here before shellfish become toxic."

The Great Bay Coastal Watch operates under the umbrella, so to speak, of the UNH Cooperative Extension and N.H. Sea Grant. Not only does it conduct extensive water testing, but it also collects and monitors blue mussels from various shellfish beds at some of the aforementioned testing sites.

Mussels are filter feeders, meaning they eat particles filtered out of the water. Those particles often include phytoplankton, most of which is not harmful. But some species make large amounts of toxins that can accumulate in mussels and other shellfish, potentially poisoning anybody who eats the contaminated shellfish.

Mussels collected by the watch team are sent to the state health lab in Concord and tested for toxicity. If the levels are too high, the N.H. Department of Environmental Services will shut down shellfish beds.

That's what happened in the spring, and the Great Bay Coastal Watch deserves credit for the discovery.

The group's work is vital to the efforts of the DES and its shellfish program. Chris Nash, a DES environmentalist and the shellfish program manager, makes the decision on opening and closing shellfish beds. He acknowledged the considerable help his department gets from the Coastal Watch team.

"The information they provide on phytoplankton is interesting and useful," he said. "The kind of help they provide us changes from year to year, and they have been helpful in assisting us with the red tide monitoring."

The recent red tide outbreak is still almost unfathomable to Nash. "The red tide event was so overwhelming this year," he said. "It was the worst toxicity since the 1970s. There was a high level in 1993, and that was dwarfed by what we saw this year. It was among the worst ever."

Nash, like Dolan, said the red tide levels are dwindling and the ban on some species, including blue mussels, has been lifted.

"It is getting better, but we're not out of the water yet," Nash said. As for whether red tide will return this year, Nash said it "wouldn't be abnormal." He also wouldn't make any guarantees. "That's not a prediction," he said. "You can't predict how these things are going to go."

When the eastern and western Maine coastal currents come together, Dolan said cells causing the harmful algal bloom can be brought down to our waters. Whether the cells settle here and develop their own population remains to be seen.

Dolan, like Nash, stopped short of making a prediction for this season, but she said she "wouldn't be surprised if it came back." If there is another outbreak, the Great Bay Coastal Watch team is going to find it before it becomes a problem. Dolan knows it, and said she is grateful.

"The people volunteering for me do a fabulous job with not much more than a pat on the back," she said.

The volunteers, including Johanna Hock, don't need it. Their love of science is reward enough.

# Land transfer to protect 1,000 acres

By Peg Warner , Exeter Newsletter, Jan 6, 2006.

NEWMARKET - Habitat for a variety of waterfowl will be protected with the pending transfer of more than 1,000 acres in eight Great Bay communities from The Nature Conservancy to the state Fish and Game Department - the largest such transfer so far by the Great Bay Resource Protection Partnership.

The parcels range in size from 10 to 359 acres, with the largest tract, the Dow property, located along the Piscassic River near the Exeter-Epping-Newfields borders, abutting 600 acres the department holds. The land transfer includes 806 acres in 12 parcels the Conservancy acquired from landowners between 1999 and June 2005 and conservation easements from two more tracts that total 220.5 acres. Other parcels in the transfer include the Baglin property, also along the Piscassic, Shackford Point and Tuttle Swamp and the Benoit land in the Ash Swamp Road-Grant Road-Route 152 vicinity of Newmarket, the Nichols tract along the Piscassic in Newfields, clusters around Crommet and Lubberland creeks in Durham, and the Smith tract along the eastern shore of Great Bay near the Newington-Greenland town line.

The Executive Council, which must approve any tracts transferred to the state, gave the transfer the go-ahead last month.

The Conservancy acquired the land on behalf of the partnership "to keep the properties in conservation to protect the habitat on the property," Duane Hyde, director of protection for the Conservancy, said this week, calling the land "important waterfowl habitat" and examples of wetland and upland systems. The partnership has deemed the parcels valuable for protecting the water quality of Great Bay.

The parcels are home to a variety of waterfowl, according to Ed Robinson, waterfowl biologist with Fish and Game, including mallards, black ducks, wood ducks and Canada geese.

"We're buying it for its habitat," he said.

The transfer is not yet complete, said Robinson, so none of the parcels are available yet for the public to use - word that didn't reach some visitors who, according to Robinson, encountered "trouble" on some of the land since the transfer was publicized, although he would not go into detail about the nature of the problems. Only the parcels purchased outright, not those with easements, will be open to public access once the transfer is finalized, he said, and even on those, some areas will be off-limits. He said Fish and Game will make maps available for those wishing to use the land.

"They're not ours yet," he said.

The transfer is the latest piece of a project in which the public-private partnership has acquired some 4,000 acres in all over the last 11 years, said Robinson.

He said the partnership works "hand-in-hand" with the towns involved and their local conservation commissions to identify land to acquire. Some local funds were used in acquiring the parcels, according to Robinson, but he said "90 percent" of the funding was federal, from the North American Wetland Conservation Act and the National Oceanic and Atmospheric Administration. In a press release announcing the transfer last month, the partnership attributed much of the federal portion to the efforts of Sen. Judd Gregg.

The Conservancy is the partnership's lead acquisition agent. Other agencies in the partnership include Ducks Unlimited, Great Bay National Estuarine Research Reserve, Natural Resources Conservation Service, New Hampshire Audubon, New

Hampshire Fish and Game Department, Society for the Protection of New Hampshire Forests, the U.S. Environmental Protection Agency and the U.S. Fish and Wildlife Service.

The public-private partnership seeks to identify and protect the bay's most critical habitats, and decides which agency should hold the deed. Fish and Game was chosen for this latest transfer, according to Hyde, because of the type of habitat and because it already holds land in the area, and having a single owner makes for better management of a given system.

"It's a combination of those two things," he said.

## Finished puzzle

Great Bay Conservation

By Emily Aronson, Portsmouth Herald, June 30, 2006

NEWMARKET -- Daryl Burtnett, director of the state chapter of The Nature Conservancy, likens preserving land around the Great Bay to putting a puzzle together.

Parcels are fragmented by various owners across towns, with some privately owned, some public or some already under conservation easements.



Lowe's employee Kevin Measel peers through binoculars at conservation land outside The Nature Conservancy's new office on Great Bay in Newmarket on Thursday.

Photo by Andrew Moore

And it's not only pieces of land that must come together to protect the Great Bay ecosystem. Various people, from local residents to federal officials, must work to support conservation efforts. That's why Burtnett and The Nature Conservancy Thursday celebrated all parts of the puzzle

falling into place with the purchase of a 35.5 acre property off Bay Road.

"The parcel sits right between two other parcels we've protected," Burtnett said. "(The Great Bay) is very close to coming together as a unified, connected area."

The sprawling waterfront property expands the Conservancy's Lubberland Creek Preserve, which is now 2,300 acres of continuous protected land. The preserve protects high quality salt marsh and 1,700 feet of frontage at the mouth of Lubberland Creek, and it is home to diverse tree and plant life, as well as waterfowl and other animals.

"This is one of the best success stories in the state," Burtnett said.

The 35-acre Bay Road parcel will also be the new home of The Nature Conservancy's Great Bay office. The land used to be privately owned, and the nonprofit organization converted the small residence on the property into an office.

The group was able to buy the property thanks to support from local residents, private donors, a federal grant acquired by U.S. Sen. Judd Gregg, R-N.H., and a \$200,000 donation from Lowe's home improvement store.

Burnett said the corporate sponsorship of Lowe's was a first, with the company providing \$1 million to The Nature Conservancy for various restoration projects in the Northeast.

All of the groups who supported the project joined The Nature Conservancy at the property for a boat ride, hike and ribbon-cutting ceremony outside the new office.

GO & DO -- The Nature Conservancy's Lubberland Creek Preserve, located off Bay Road in Newmarket, is open to the public and has a number of walking trails. For more information, visit [www.nature.org/newhampshire](http://www.nature.org/newhampshire).

## Council will allow weir to stay on town land

By Peg Warner, Portsmouth Herald, Dec 8, 2006

NEWMARKET -- The Town Council will permit the man who works the historic fish weir on the Lamprey River to continue to store a part of the apparatus on town land.

The unanimous vote and mea culpa, followed a parade of support for Gerry Collins and apologies from councilors, who said they didn't have all the information before an earlier vote and a letter sent demanding Collins remove the pocket of the weir from Schanda Conservation Park.

The letter was drawn up at the request of the Conservation Commission, which wanted the pocket removed before the Heritage Festival in September. The commission oversees Schanda Park.

Collins told councilors it was necessary to store the pocket near the river because it was too large to move legally and too fragile to survive a move. The pocket is part of a weir that has been in the river for decades and a fishing technique dating back three centuries to the Indians, according to Collins and his supporters. Collins assumed stewardship of it when its previous owner, Chick Hayes, died nearly three decades ago. "Chick's weir is New Hampshire's only remaining weir and has been for the last 30 years," Collins said. "If I have to move the pocket, it'll be the end of Chick's weir."

The vote on council Vice Chairman Brian Hart's motion rescinded the October vote, authorized Collins to continue to store the pocket at the waterfront park and set the stage for Collins and the town to draw up a legal agreement formalizing the arrangement.

The issue brought out a current and former state legislator, along with local history buffs. Some said the weir is an attraction for the town, even on its Web site.

State Rep. Dennis Abbott said it would be a "very bad example" to force Collins to remove the pocket, calling it "as much a part of our heritage as that covered bridge" that connected two riverfront mill buildings until it was washed away in the May flood.

Patti Blanchette championed the cause of both Hayes and Collins when she served in the Legislature in the 1970s and 1980s and saw legislation passed to protect the weir against an attempt by New Hampshire Fish & Game to have it

removed. "It boggles our mind that the request to move the pocket is made for the Heritage Festival," she said. "That weir is part of our heritage."

The issue also brought support from Chris Schoppmeyer, who worked for Fish & Game during the dispute with Hayes. Schoppmeyer told the council when he served on the Conservation Commission, the panel supported the weir.

"I find it troubling that we make these decisions with an absence of knowledge and an absence of research," he said.

Council Chairwoman Jennifer Jarvis blamed the October vote on "miscommunication" and earlier information that no records indicated the town's consent to allow the pocket to be stored on town land.

Collins cited a unanimous 1982 vote by then-selectmen allowing him to store the weir at the town landing.

The discussion put Councilor Wilfred Hamel on the spot because of his concurrent position as Conservation Commission chairman. Collins said no one from the town spoke to him before his receiving the letter. Hamel said he approached Collins weeks before the letter went out. "You told me in no uncertain terms that you weren't about to do it," he said.

Collins said he told Hamel of the difficulty in moving it and that he had not put it in the water this year as he does each spring because of the flooding, "and then I told you that it had more heritage than Heritage Day."

Hamel voted with the rest of council to rescind the previous order.