

LEVELS COULD BE HARMFUL

State: Limit River Bass Consumption Because Of Mercury

BY SUSAN USHER

If you eat largemouth bass caught in the Waccamaw River in Brunswick or Columbus County, State Health Director Dr. Ron Levine has some advice he'd like you to take seriously—cut back consumption or stop eating the fish altogether.

High levels of mercury found in largemouth bass tested over the past year led the state last Wednesday to issue a fish consumption advisory which applies to the bass only.

The river is considered safe for recreational purposes such as swimming, wading and boating, as well as eating other types of fish caught there.

"We want to stress this is only largemouth bass for this advisory," said Ken Rudo, a state toxicologist. "All other fish are OK to eat."

"A lot of people fish the Waccamaw River to feed themselves and their families, and my concern is these people. For people who are fishing on a regular basis in the river my advice is to not eat the bass," said Rudo. "If you do eat them, limit your intake. The key is the rate of consumption."

Advisory signs will be going up along the river in the next few days.

Also, a meeting will be held next Monday, Aug. 2, at 7 p.m. in the Old Dock school cafeteria. State officials will discuss the advisory and related information findings with local residents who have questions.

Excessive mercury levels can affect the central nervous system and can cause brain and kidney damage as well as birth defects.

The advisory alerts women of childbearing age and children age 15 and under not to eat largemouth bass taken from the river or from Big Creek, near Lake Waccamaw in Columbus County. Adult men and older women are advised to cut consumption to no more than two meals a month, based on a half-pound serving of a fish each meal.

Dwight Babson of Ash, whose family owns a boat landing on Waccamaw River at New Britton Bridge, isn't certain what impact the advisory will have on river fishing or how seriously people will take the advisory.

He said he sees a lot more people fishing for sunfish (bream) than bass, and most of those who fish the river do so for recreation, rather than to put food on the table on a regular basis. Still, he said there are regulars who go in the river several times a week whose eating habits might be affected.

Local fishermen Howard Inman and Willie J. Marlowe of Ash frequently fish the Waccamaw River and surrounding tributaries. Like Babson, they attended a meeting last Wednesday at the Old Dock-Cypress Creek Volunteer Fire Department on the advisory before they headed into the Green Swamp for an afternoon of pike fishing.

Inman said he didn't think the advisory would have much of an impact on them, since their catch is typically a mix—brim, pike, catfish, and an occasional bass, "anything that'll bite."

"We don't catch that many bass, but when we catch one, we eat it," said Inman.

However, Inman voiced a concern that others might not understand the limits of the advisory. "I'd hate to see people afraid to go in the river," he said.

The state plans to conduct more sampling and testing over the coming weeks and months in an effort to define the geographic distribution of the mercury accumulations and to pinpoint possible sources of the contamination, natural or otherwise. That may be hard to do, said Jay Sauber of the N.C. Division of Environmental Management, because mercury is found everywhere and is globally transported.

Special efforts will be made to collect samples of two species that are popular table fish but were not found in earlier samples: white perch and bowfin, or

blackfish.

Perch is a member of the bass family. Blackfish is the major predator fish caught in the river in winter and the key ingredient of blackfish stew, a popular winter-time food for locals.

"I'd like to see them check the bowfin," said Babson, whose family net fishes commercially for blackfish each winter.

"A lot of those are eaten in the winter. We sell probably a thousand pounds or more. We can't keep them."

Smith said the state also is interested in meeting with individuals who are concerned about the adverse health effects of long-term consumption of mercury-contaminated bass. Tests are available that indicate blood mercury levels.

The local largemouth bass advisory will remain in place until tissue tests of fish taken from the waters test below the federal action level for two consecutive years.

Meanwhile, Babson says he plans to simply tell customers "just what I've been told," he said.

A meeting will be held Monday, Aug. 2, at 7 p.m. at Old Dock Elementary School Cafeteria in Columbus County for local residents who have questions about the advisory.

Why Just Worry About Bass? And Other Good Questions

Why are excessive mercury levels showing up in bass, but not in other fish taken from the Waccamaw River?

How can it be OK to eat other fish taken from the same water when you shouldn't eat the bass?

Those are just some of questions state scientists are trying to address as they spread the word of an advisory urging residents to limit consumption of largemouth bass caught in the Waccamaw River in Brunswick and Columbus counties, and in Big Creek in Columbus County. Excessively high levels of mercury have been found in bass taken from those waters.

"We're all exposed to mercury on a daily basis—in our food, in our drinking water and in the air we breathe," said Greg Smith, a senior state epidemiologist. "This is a preventive measure, nothing to panic about."

Mercury is a chemical element found in nature in several forms. Mercury has also been used in batteries, switches, fungicide, paint pigments and electrical equipment. When released into the environment it stays there a long time and can be transported globally through the atmosphere.

Mercury also combines with other elements to form compounds. When combined with carbon, a process that occurs in biological systems, for example, mercury is converted to its more toxic form, methylmercury, which can affect the central nervous system.

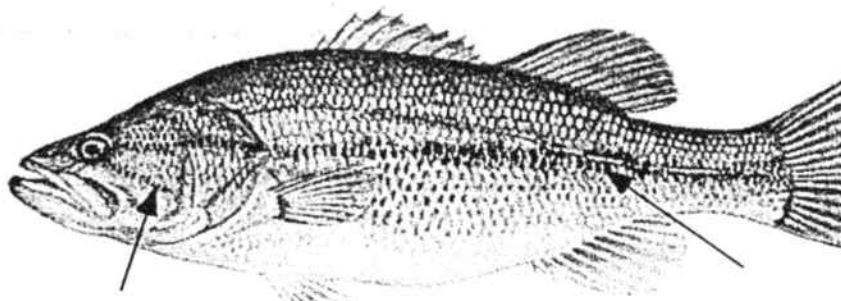
"High levels of this form could cause adverse health effects, particularly in young children and fetuses," said Smith.

This form of mercury can build up in certain fish.

Bass are one species of those fish. Furthermore, the species is at the top of the Waccamaw River food chain, are long-lived, and generally stay in one small area all of their lives. For those reasons, they serve as good indicators of what is going on in that environment.

Bass take in mercury through their food and through their gills. From the time mercury is first absorbed in the system, it takes 70 days for half of it to disappear. That means when mercury is taken in on a regular basis (faster than it is released) levels tend to build up in the tissue.

"The largemouth bass accumulate mercury at a rate thousands of times greater than we are able to detect it in the water," said Jay Sauber of the Division of Environmental Management. "That's why it gives us a sense of what is going on in that environment over a long period of time."



THE LARGEMOUTH BASS is generally dark green above with silvery sides and belly. A dark stripe runs head to tail but generally breaks up in larger individuals. Three dark bars are found on the sides of the head behind and below the eyes.

That's also why you can have one type of fish that may not be safe to eat swimming in water that's otherwise safe for recreational swimming, boating and even catching other types of fish for human consumption.

Bass collected from above and below Lake Waccamaw showed high mercury levels, but few of the bass taken from the lake itself did. State officials believe it is safe to eat bass taken from Lake Waccamaw.

Why the levels are different Sauber doesn't know. He said the higher pH and unique environment of the lake could be factors affecting the rate of mercury uptake by the fish.

The state has no obvious explanation for the differences in test results, or for the source of the mercury itself.

In fact, if local residents have suggestions as to possible sources of the mercury, Sauber and other state researchers want to hear about them.

The department also wants to hear from fishermen regarding popular fishing areas to be added to the list of sampling sites, such as Juniper Creek and the "lakes" of Seven Creeks. The locations proposed will be rated by priority. "We'll try to hit those fishing hot spots," said Sauber.

The state will not test bass from privately-owned ponds or lakes in the advisory area, but suggested that it would be a good idea for owners to have samples tested in a private lab and to reduce consumption as a precaution.

Levels High For Bass Only, Not Other Fish

The bass taken from the Waccamaw River and Big Creek had mercury levels in excess of one part per million, the federal standard for taking preventive action to protect public health. At Pireway (N.C. 904), five specimens sampled showed a mean mercury level of 1.48 ppm, and at the New Britton Bridge on N.C. 130 near Ash, five bass showed a mean level of 1.39 ppm.

At the Crusoe Island Bridge (S.R.

1928), the one bass caught in May 1992 sampling was at a safe level, .78 ppm.

With only individual exceptions, the mercury levels in other species of fish tested was well below the federal action level. Also, only normal traces of mercury were found in the water itself or the bottom sedimentation.

Only when mercury levels consistently reach 1 part per million (ppm) does the federal government recommend the state act to warn consumers of a potential health threat.

The level has a built-in safety factor when it comes to adults. The danger level of mercury in an adult male is about 15 to 20 parts per million. But the danger level for an unborn child or a child in the developing years is about 5 ppm.

"In children we do not have the luxury of a safety factor," said Ken Rudo, a state toxicologist.

The Waccamaw River and Big Creek are the third set of North Carolina waters to be posted because of mercury contamination of fish. A consumption advisory for part of High Rock Lake was issued in 1981 and lifted last spring. A former mercury submarine battery plant site that has since been cleaned up was the source of that contamination.

Two weeks ago three man-made golf course lakes in Moore County were posted. No obvious source has been found yet for that contamination.

In South Carolina a temporary advisory has been posted for Waccamaw River as far south as Conway, subject to being lifted or extended farther downriver depending on the results of tissue testing now under way, said "Butch" Younginer.

More information on the advisory, and on methylmercury are available from the N.C. Department of Environment, Health and Natural Resources Public Affairs Office, 919-715-4112, or the state's environmental epidemiologists, at 919-733-3410.



STAFF PHOTO BY SUSAN USHER

DR. HARRY JOHNSON (center front) attended a meeting with state health officials last Wednesday, along with fellow Brunswick County Board of Health member Pat Newton, Brunswick County Commissioner Wayland Vereen and Environmental Health Coordinator Andrew Robinson of the Brunswick County Health Department. The health department will be cooperating with the state in getting word out on the bass advisory.

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