

Olympic High helps improve environment one test at a time

Students in the SeaVibe Club test area water sources for bacteria contamination

By Brittany Penland [Special to the Observer](#)

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Alexandra Espinoza, 16, a sophomore at Olympic High School make sure her pipette is precisely filled with stream water after taking a sample Saturday. John D. Simmons - jsimmons@charlotteobserver.com

At age 7, Alexandra Espinoza traveled from Charlotte to her native Peru to visit family. Now a sophomore at Olympic High, she recalls the mud homes and dirt roads in Peru, and that the water was anything but clear.

After drinking that water, Alexandra said she became ill with fatigue and vomiting. And since that trip, she has become keenly aware of all the water she drinks. So she wants to make sure Charlotteans are in the know about water quality.

Alexandra, along with about 20 of her peers, comprise the SeaVibe Club at Olympic High. The club's mission is to protect the environment through water testing.

The club, which began in 2010, works with the Catawba Riverkeeper Foundation to conduct water quality tests in the Charlotte area. There are three SeaVibe clubs in the nation – at Olympic, Independence High and one in California.

Students in the environmental club test water at various locations, from Parkwood Avenue in Charlotte to Regent Parkway in South Carolina. They're looking for something called fecal coliform bacteria – microscopic organisms that live in feces. If that bacteria is present, other disease-carrying bacteria may also be present, said Lori Jones, SeaVibe advisor at Olympic.

Students submit their findings to the Catawba Riverkeeper Foundation, which analyzes their results and incorporates students' work into their own research.

“We want to impact all of Charlotte (with these results),” Jones said. “The point of SeaVibe is for these kids to do something hands-on.”

Two Saturdays each month, the group gathers at Olympic at 9 a.m. They collect supplies – including a lab notebook, pipette, petri dish, and coliscan (a chemical that identifies coliforms and E. coli in water) – before setting out to area creeks, rivers and tributaries.

They often trudge through thick brush and thorns and climb down steep embankments under bridges to get to water, said Devin Dixon, a junior in SeaVibe.

After collecting water in petri dishes, the students bring the samples back to their classroom. The petri dishes then rest in an incubator at about 72 degrees for two days.

Olympic and Independence have taken about 40 water samples this school year, Jones said. On multiple excursions, the club reports visible contamination in creeks. They've seen discarded deer carcasses, old furniture, wire, soda bottles and leaking sewer systems.

“We don't need to be paranoid, but we need to be aware,” Alexandra said. “Water is fuel.” On a monthly basis, Sam Perkins, director of technical programs at the Catawba Riverkeeper Foundation, talks with the students about the results of their testing.

Perkins said Olympic and Independence each have about 15 [testing sites](#), along Sugar Creek and Little Sugar Creek.

One major concern? Perkins said people should be more aware of the amount of fertilizer and pet waste in their yards. Each can easily wash away into waterways.

“Rivers and streams are where everything condenses and concentrates,” Perkins said. “Some people don't realize they are a part of the problem ... (that) some of that bacteria in the water comes from fertilizer and pet waste in their yards.”

Kassandra Ramos, SeaVibe's president, interned with the Catawba Riverkeeper Foundation during the summer.

“Some of these creeks are filthy and this is our drinking water,” Ramos said. “It goes through so much before it gets to us and how do we know it's truly clean?”

Perkins said he appreciates the time and work the SeaVibe students put into testing.

“It is very easy for kids to take municipal systems for granted and to assume that if the water coming out of their tap is clean enough to drink, then the system must be just fine,” he said.

In the spring, Perkins plans to include the students in a water project that will test for contamination as a result of leaks around coal ash ponds. The crew will take samples in Mountain Island Lake. The lake is just below the Riverbend coal ash pond, which is a Duke Energy runoff pond that stores 28 acres of coal ash. Catawba Riverkeepers will present the findings to Duke Power, which owns the ash pond, Jones said.

It is SeaVibe's goal to make Charlotte residents more conscious of their impact on water supplies.

“We're not asking for people to be tree huggers,” said Adrienne Carter, SeaVibe participant. “We just want them to be more aware.”