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Students' summer job consists of monitoring water in area lakes

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Outdoors Editor



Flipping burgers and changing oil in the fry bin is the extent of many high school students' summer education. But this summer eight Brainerd High School students have learned the importance of environmental stewardship and the basics of operating a small business.

The eight students are part of Outdoor Corps, a water-monitoring program sponsored by the University of Minnesota Extension Service. For \$150, lake associations hire students to test the water in their lakes and report their findings.

Eight lakes have been tested this year: Upper South Long,

Megan Dyson (left) and Chad Johannessohn are among eight Brainerd High School students who have monitored water in area lakes this summer as part of the Outdoor Corps water monitoring program. Monday morning they took water samples from Upper South Long Lake. With them is Kent Montgomery of the University of Minnesota Extension Service, the agency that helps coordinate the program. (Dispatch Photo by Vince Meyer)

Roger, Placid, East and West Twin lakes, and Upper, Middle and Lower Cullen lakes. The students earn \$7 per hour and if they stick with the program throughout the season they get a bonus that brings their overall pay to \$8 per hour.

Participating students include Chad Johannessohn, Megan Dyson, Kelli Knudsen, Rachel Hobson, Melissa Larson, Stephanie Kinney, Drew Bylander and Tony Swanson.

"It's great to have a job that gets you outdoors," said Johannessohn, a sophomore who also works at McDonalds.

On a calm, sunny Monday morning this week Johannessohn was joined by freshman Megan Dyson and Kent Montgomery, a University of Minnesota Extension agent based in Brainerd. They launched a 14-foot Crestliner boat on Upper South Long and, with the help of a hand-held GPS, headed for the middle of the lake to a 40-foot spot where three previous tests were performed in May, June and July. For consistent and accurate tests it's important to take readings in the center of a lake at or near its deepest spot, Montgomery said.

Over the next half hour the threesome gathered the information they needed to determine the lake's clarity, temperature and dissolved oxygen, phosphorous and chlorophyll-a content.

Clarity is measured with a Secchi Disc, a circular white disc about the size of a pie plate. Johannessohn lowered the disc into the water, which had a significant green tint, until the disc disappeared. Then he dropped the disc to the bottom and brought it up until it appeared. By averaging the two readings

Johannessohn determined the water clarity was 6 feet.

Next were tests for temperature and dissolved oxygen. A probe was lowered to within a meter of the bottom and a sample was taken within every meter, including the surface. The lake's oxygen content varied from 9.6 milligrams per liter at the surface to 0.1 milligrams at 12 meters (39 feet). It's important, Montgomery said, not to let the probe touch bottom or it could become fouled with muck.

The water temperature was measured with the same probe and it varied from 74 degrees at the surface to 52 degrees at the bottom. The thermocline, the band of water where temperature and oxygen content rapidly decline, began at about 20 feet.

Finally, a 6-foot PVC pipe with a check valve attached to one end was used to take up water and place it in two plastic bottles. The water will be taken to A.W. Research Labs, a certified water-testing laboratory in Brainerd, where its phosphorous (nutrient level) and chlorophyll-a (algae) content will be determined.

"We're blessed to have this nice, calm weather," Dyson said after the tests were finished. "It makes it a lot easier to do our tests."

Upper South Long finished, the threesome put the boat on the trailer and headed for Placid and Roger lakes.

The final step in the water monitoring program is to report the findings to the lake associations, a job the students also do.

The three main points of each presentation are: what did we find, what does it mean and what can you, the lake association, do about it?

Outdoor Corps is in its second year and Montgomery said it's growing.

"We hope to be working in St. Louis and Stearns counties next summer. Mississippi Horizons has developed a Web site where lake associations can get the results from our tests. It's been a great experience for the kids and a win-win situation for A.W. Research because they don't have to put staff in the field. If we can partner with some other agencies we can expand the program and provide these kids with great part-time summer jobs."

Summer education has grown beyond the Fast Food Academy.

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