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# UDC's water and soil testing lab earns national accreditation

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FEBRUARY 11, 2016 | BY *by Carol F. Stoel*

If you have been as horrified by the Flint, Michigan, water disaster as I have, you will be interested to know that the District of Columbia is fortunate that a newly certified Environmental Quality Testing Laboratory is operating at the University of the District of Columbia.

Last summer, the College of Agriculture, Urban Sustainability, and Environmental Sciences (CAUSES) received word that the laboratory received the highest accreditation from the National Environmental Laboratory Accreditation Program (NELAP). Because the District regrettably is not a state, it does not have an EPA state-level accrediting body, making it necessary to go through the more stringent and strenuous NELAP certification process. CAUSES Assistant Dean William Hare received the initial grant of $600,000 from the District Department of Energy and the Environment and has guided it through development. UDC has also invested in the lab.

UDC's *Legacy* magazine proudly reports that the lab first opened in 2012 and was developed to give District residents "an accessible and affordable means for testing water and soil for environmental contaminants and other impurities, and to serve as an unbiased monitor of surface, ground and municipal water quality in D.C., helping to protect water resources and human health."

The lab is now certified for testing minerals and trace metals in potable and non-potable waters in accordance with the provisions of the National Environmental Laboratory Accreditation Conference (NELAC) Standards. CAUSES Dean Sabine O'Hara finds the lab to be a terrific boon to the District because in the future, testing will no longer have to be contracted out.

Also, the lab will be used to teach local students how to monitor our water resources for harmful substances such as lead, mercury or E. coli. According to Professor Tolessa Deksissa, who has been responsible for setting up the laboratory and uses it for his classes, the laboratory is not yet able to test every substance, but within six months, staff will have developed the appropriate standard operating procedures and put in place the necessary instruments and materials to be able to test for almost anything. This could save the District at least $2 million annually.

Deksissa's students run the gamut of students. Some are in the lab as part of their required Discovery Science and Research obligation for graduation. Others are studying civil engineering and still others are part of the University's Professional Science Master's program in Water Management.

I visited the laboratory during the first lab of a junior/senior-level science class required across disciplines. Here the interests are even more diverse. One student is studying early childhood. Others are studying political science, civil engineering and accounting.

As these photos show, this is a serious introduction to substance testing with students learning pipetting techniques and using modern instruments to measure oxygen and phosphorus in water and other liquid substances. All are marketable skills for a

wide variety of companies ranging from the food industry to governmental agencies.

It is comforting to think that UDC is preparing students who understand the importance of quality standards for evaluating water quality and how to make sure appropriate tests are conducted on a regular basis and certainly before any major changes are undertaken. If officials managing Flint's water had done so before switching their source, Flint's young children would have been free from lead poisoning today.

Missy Sogbohossou serves as a teaching assistant to the class. She first trained as an electrical engineer and now is getting her Professional Science Masters (PSM) degree in Water Resources Management. Sogbohossou is also an intern with DC Water and says she is benefiting directly from her work in the laboratory. Currently, there are ten in the PSM program.

Across the country, the PSM is a popular new degree for students who major in science or engineering but feel that they need some management courses as well as some more advanced science study in order to advance in their careers. As with Sogbohossou, the program usually requires an internship, which is great experience for the students and quite often leads to a good job.

The District routinely monitors its streams and rivers, including Soapstone Creek, where E. coli was discovered last summer. This nationally certified laboratory, with its committed faculty, technicians and students, offers more opportunity to watch over and protect our natural resources.