Automated Water Sampler

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ABSTRACT:

In this project an automated water sampling device was designed, prototyped, and further refined for collecting water samples from interstitial spaces at the bottom of a water body. In the first phase of the project the design was completed, and seven units were prototyped and deployed for water sample collection at the Buffalo Reef in Lake Superior. Based on the sampling results, the design was further improved to eliminate possible sources of contamination from the device itself, and to simplify the cleansing procedure before deployment. A total of ten sampling units were finally produced, with nine successfully deployed for sample collection at multiple spawning sites for lake trout and lake whitefish at the Buffalo Reef.