WHAT HAPPENS WHEN WE USE TIMELAPSE TO MONITOR BLASTING AT MINE SITES?

Free town, we followed the Eighteen Mile Creek deterioration 1.5 miles upstream to where it branches with Babine Valley creek and finally to the southern edge of the Ennis Oil & Gas (EOG) town, taking photographs of the federal water from public roads. One or more settling ponds in the mine had obviously been breached... By Lee Boland


The initial concept for the Riffle was a volunteer monitoring project designed to measure water and temperature conditions in creeks and streams in the vicinity of hydraulic fracturing sites. The Riffle is a design for an open-source, DIY, and low-cost water monitoring system that can be used by anyone with some basic knowledge of electronics and some basic skills in DIY. It is easy to assemble and use, and it can be deployed in a variety of environments to collect data on water quality and other environmental parameters. The Riffle is available as a kit that can be assembled at home, or it can be purchased as a complete system. In either case, the Riffle can be used to collect data on a variety of environmental parameters, including water temperature, pH, conductivity, dissolved oxygen, turbidity, and more. The Riffle is designed to be used in a variety of environments, including streams, rivers, and lakes. The Riffle is a tool for citizen scientists who want to monitor the environment and help protect it from pollution. The Riffle is not a substitute for professional monitoring, but it can be used to help identify pollution and help prevent it. The Riffle is a tool for citizen scientists who want to monitor the environment and help protect it from pollution. The Riffle is not a substitute for professional monitoring, but it can be used to help identify pollution and help prevent it.
My dad and I love to go hiking, particularly around bodies of water like lakes, rivers and streams. He always says how calming the water is for him, even to watch it rushing through slats of a wooden bridge.

Seeing beautiful scenery under less pressure is a source of peace for the two of us, especially during the changing of seasons. It always rushes by, even when leaves fall off the trees and birds fly south.

Water’s everlasting presence attracted me to study it, but I didn’t think how to approach it with my journalism degree. Luckily Emily Corio, an assistant professor at West Virginia University Reed College of Media, mentioned she was teaching a class called “Stream Lab” and that we’d be monitoring water. I jumped right into the class. Don Blair, John Keefe of WNYC, and other Public Labbers created “Riffles” (Remote Independent Field-Friendly Logger Electronics) that our class used to monitor conductivity and temperature of the Monongahela River.

At first, when Keefe and Blair came bearing gifts of bundles of wires and circuit boards, I became slightly overwhelmed because my childhood was mostly spent learning about the outdoor realm, not the computer world. But then I thought back to why I was doing this, to the world’s life source that gave me peace. I took a deep breath, shut off the negativity out of my head and took a step into the unknown.

Keefe and Blair were excellent teachers, patiently explaining how it all worked, even how it might not work. Keefe isn’t an engineer either, which gave me more hope to better understanding and testing these systems.

Riffles are arduino-based dataloggers, modified to better fit in Gatorade bottles, and we added cell modems that live-texted results to a website. Because of their low cost and simplicity, this is an easy way to collect crowdsourced data, which is a unique way to monitor a stream’s quality, compared to sparse traditional stationary monitoring stations. This project shed a brand new light on monitoring our water systems.

The Public Laboratory for Open Technology and Science is a 501(c)3 nonprofit organization which supports a growing community in developing and applying open-source tools for environmental exploration and investigation. By democratizing inexpensive and accessible “Do-It-Yourself” techniques, Public Laboratory creates a collaborative network of practitioners who actively re-imagine the human relationship with the environment.