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Water, Water Everywhere

The purpose of this project was to discover if water in the Cache la Poudre River is healthier after it has been filtered through a standing body of water. The project was conducted over a two mile stretch of the Poudre River. The upstream point was above the Jones Ditch near Weld County Road 23 and the downstream point was at the Poudre Learning Center on Weld County Road 27. The water between those two points is diverted into a series of reservoirs. The last body of water is the 83rd Avenue Pit at the Poudre Learning Center. It was sampled for the same indicators as the upstream and downstream locations. The sites were sampled for several chemical factors for stream health. They were: dissolved oxygen, pH, alkalinity, and nitrate. Sites were sampled for macroinvertebrates to determine species diversity and stream health. Specific species of flies indicate water quality. The data confirmed my hypothesis that the water is healthier after it has flowed through a lake. In the lake the river deposits sediment, debris, and pollutants. Therefore when it leaves the standing body its water quality has improved. For this experiment water quality was ranked on three levels: good, fair, or poor. Certain macroinvertebrates indicated a specific level. Overall the downstream site was good, the lake was fair, and the upstream site was poor-fair. This project verifies that water quality improves after a river has deposited the debris, sediment, and pollutants in a standing body of water.