

## **Long-term water quality monitoring of small agricultural streams in Alberta, Canada**

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### **Biographical Sketch of Presenting Author**

Sarah Depoe is a water quality specialist with the provincial government in Alberta (Canada) and is an aquatic biologist by training.

### **Abstract**

This presentation will introduce the AESA (Alberta Environmentally Sustainable Agriculture) Stream Survey, a long-term water quality monitoring program underway in Alberta, Canada. Initiated in 1997, this program monitors water quality trends in 23 small agricultural watersheds across the province. Tracking changes in water quality helps the agriculture industry assess whether the changes it is making are having a positive effect on stream quality. Study parameters include nutrients (various forms of nitrogen and phosphorus), fecal bacteria (fecal coliforms and E.coli) and pesticides (>40 compounds). Water samples are collected at the outflow of each watershed during high and low stream flows, and stream discharge is recorded continuously. Results from trend analyses (Seasonal-Kendall) will be presented, and the value of the Alberta Agricultural Water Quality Index (AAWQI) at identifying long term trends will be discussed.