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Surface waters - lakes, streams, rivers and reservoirs - are an important part of Alberta's environment. Alberta Environment (AENV) has been monitoring pesticides in surface waters since 1987. The provincial monitoring program is well developed and a national leader.

### OVERVIEW

- "Pesticides" is a broad term that includes herbicides, insecticides, and fungicides. Over 60 pesticides are currently licensed for use in Alberta.
- A very small portion of the pesticides sold in this province finds its way into surface waters, but as these compounds are designed to have effects on living organisms, there is reason for continued monitoring.

### PESTICIDE MONITORING

- Current pesticide detections in Alberta are comparable to other regions with similar use patterns, and have not been shown to pose a danger to recreational water users.
- AENV monitors pesticide sales, and in conjunction with Alberta Agriculture, Food and Rural Development, monitors the occurrence of pesticides in surface waters. Several hundred samples are analyzed yearly.
- When pesticides are detected in surface waters, they are usually at trace levels. However, they can exceed water quality guidelines and often more than one pesticide is detectable in each sample.
- Detections are related to sales and use patterns, pesticide-specific characteristics, and seasonal variations in the environment.

### PESTICIDE CONCERNS

- The impact of these levels of pesticides on aquatic life and irrigated crops is difficult to determine accurately. Uncertainty about the impact of low pesticide levels on aquatic life is a global issue. Alberta's monitoring is an important step towards better understanding.

- Pesticide use occurs broadly over the landscape, making them difficult to regulate at the source. Reduced use, wise management, new formulations, and ongoing education about effects and proper use remain the best ways to lower environmental risks.

### WHAT CAN YOU DO?

- Every Albertan who uses pesticides can make a difference by remembering that even small applications of chemicals in yards and gardens can eventually find their way to shared water resources.
- Management plans make a difference: From 2002 to 2004, Alberta's Operation Clean Farm program was responsible for ensuring 184,000 kg of obsolete farm pesticides were properly disposed of.

### NEXT STEPS

Pesticide monitoring continues, and monitoring for potential effects on aquatic life is increasing. AENV is working with key partners across the province to develop and implement strategies to reduce pesticide use, including reviewing irrigation guidelines with irrigation districts. As well, Alberta continues to work with federal agencies to improve pesticide guidelines and regulations.

### FOR MORE INFORMATION

Surface water reports and information sheets are available on the AENV website: [www.gov.ab.ca/env](http://www.gov.ab.ca/env). For information on other department programs, visit the website, or call the regional office nearest you.

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