



Photo Credit: Gary Lewis



2012 Water Quality Snapshot

Thousands of Albertans get their feet wet monitoring Alberta's waterways!

Alberta Water Quality Awareness (AWQA) 2012 was a great success! Over 1700 Albertans got out and explored the water quality of their local ponds, rivers and wetlands from May 15th to August 31st. Together, Albertans of all ages sampled 225 sites for four basic water quality parameters: temperature, dissolved oxygen, pH and turbidity.

In this report, sampling results from across the province are pooled to create a snapshot of water quality. The greatest accomplishment, however, was the collective effort of Albertans to monitor the state of their local waterways and to discover more about the importance of water quality and healthy watersheds.



Photo Credit: Jessica Davis

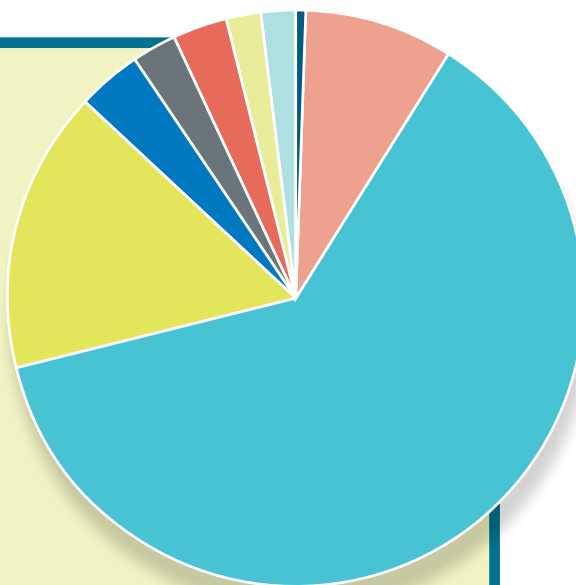
A SEASON OF SAMPLING

The goal of the AWQA program is to increase awareness and understanding of our water resources, while also promoting stewardship and personal involvement in the protection of our waterways. What about the "Day"? AWQA Day has been a program since 2005 and has worked to achieve its goals by promoting water quality monitoring of local waterways in Alberta watersheds. However, monitoring activities have never been restricted to just one day! AWQA day will still be observed on June 5, as part of Environment Week, but the program can be referred to as just AWQA, reflecting the entire open-water season that is available for testing and reporting.

Who took part?

- 788 test kits were distributed throughout Alberta.
- 1779 people participated in an AWQA sampling event.
- AWQA Day samplers collected water quality results from 225 sites.

A wide variety of groups participated in AWQA Day 2012:



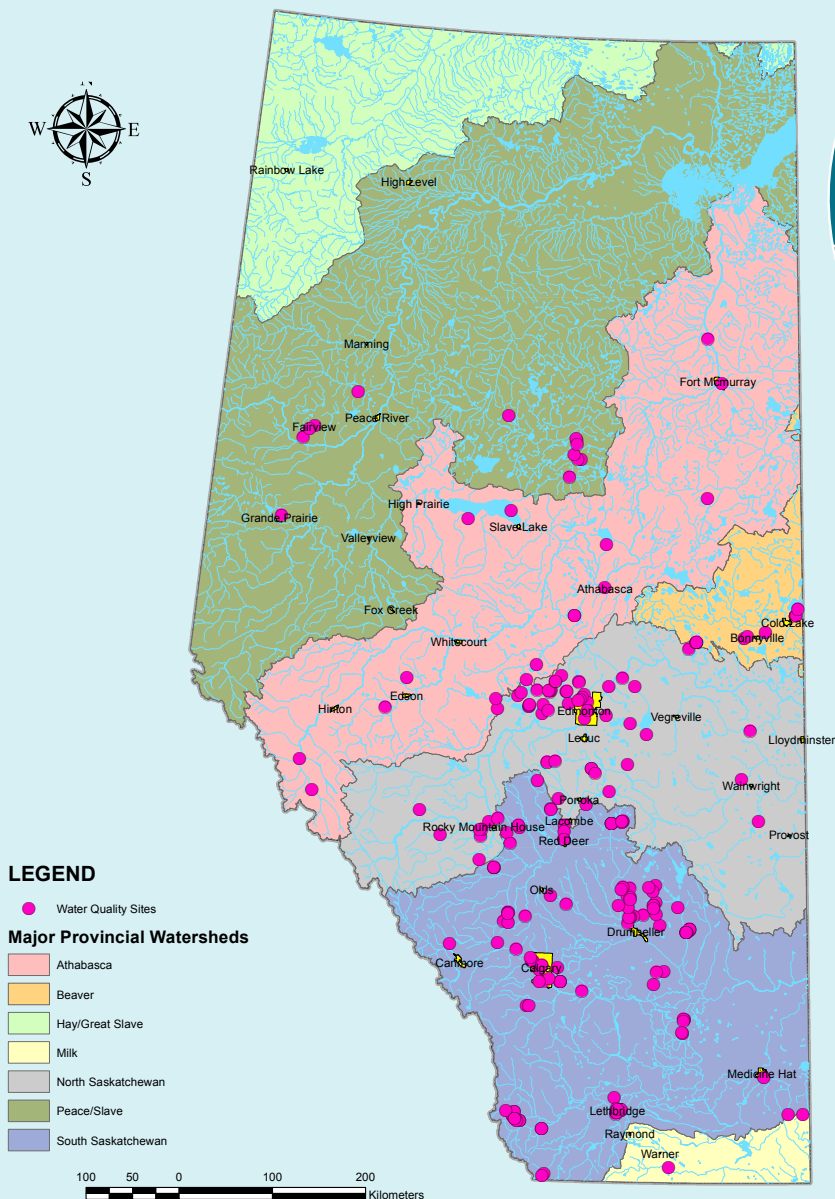
- | | |
|-----------------------------|-----------------------|
| Other | School |
| Non-Government Organization | Individual or Family |
| Watershed/Lake Group | Youth/Community Group |
| First Nations/Aboriginal | Industry/Business |
| Government Agency | |

Thank You!

AWQA could not be a success without its invaluable participants. Our sincerest thanks to those who took an interest in preserving the health of local watersheds.

Where did people sample for water quality?

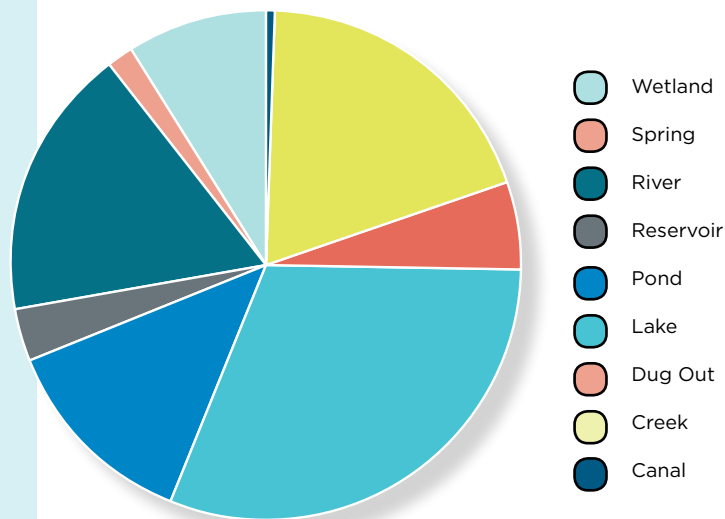
Water samples were collected and tested in six of the seven major river basins in Alberta. The provincial map shows where the 255 water quality sample sites were located.



Major Basin	% of total participants in 2012	% of sites/ watershed in 2012
Athabasca	7%	7%
Beaver	4%	38%
Hay/ Great Slave	0%	0%
Milk	1%	2%
North Sask	25%	19%
Peace	6%	4%
South Sask	56%	31%

Additional AWQA maps can be found at www.awqa.ca. See how water temperature, turbidity, dissolved oxygen, and pH varied within each major watershed.

What types of water bodies were sampled?



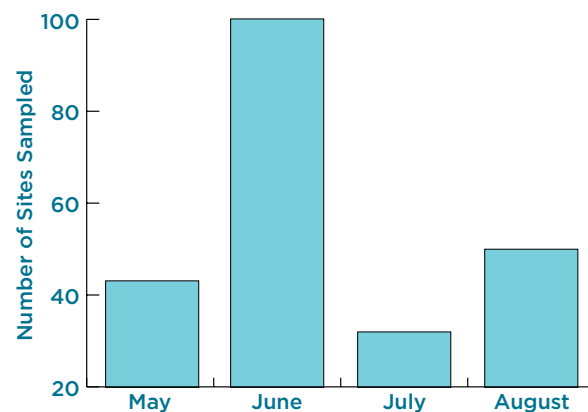
Many different surface waterbodies, from ponds and dugouts to rivers and wetlands, were sampled for four basic measures of water quality:

- Water Temperature
- Turbidity
- Dissolved Oxygen
- pH

These water quality characteristics are easily measured in the field and are important components of healthy aquatic ecosystems.



When did people sample for water quality?



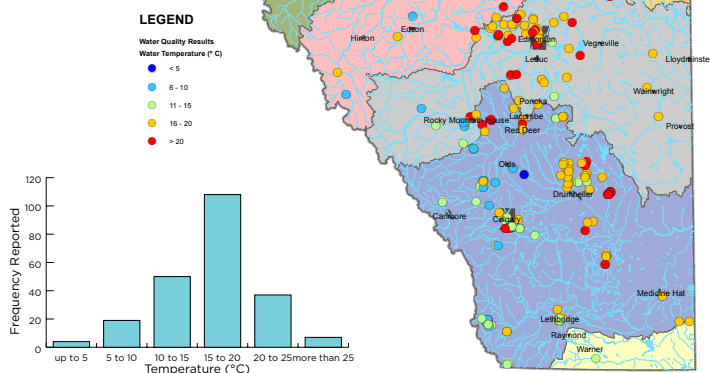
2012 AWQA Water Quality Results

While the data collected for AWQA creates a snapshot of water quality, it is not intended to provide rigorous scientific information. The true value of the AWQA program comes from the educational opportunities that arise during sampling and by engaging people throughout Alberta's watersheds and demonstrating the impact that collective action can have.

Water Temperature

... is a measure of how hot or cold the water is.

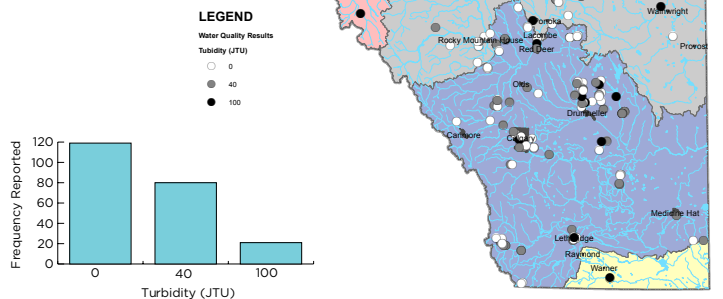
The results from AWQA indicate that the majority of water sampled was within the desired cooler temperature range.



Turbidity

... is a measure of water clarity and is a function of the amount of particles suspended in the water.

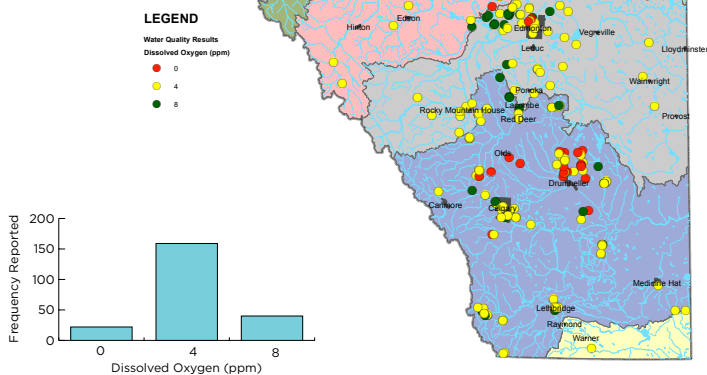
90.4% of water sampled for the AWQA 2012 had low to moderate turbidity (0-40 JTU).



Dissolved Oxygen (DO)

... is a measure of the amount of oxygen dissolved in water.

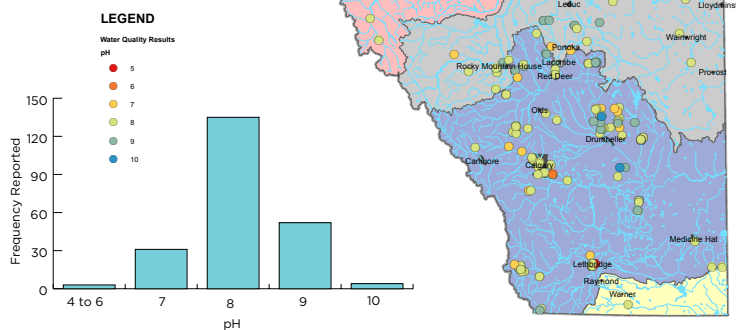
72% of water sampled for AWQA 2012 was around 4 ppm, meaning moderate to healthy DO concentrations were observed at the time of sampling.



pH

... is a measure of the relative acidity of water. A pH of 7 is considered neutral with anything less being acidic and anything greater is basic.

Over 96% of the water sampled for AWQA 2012 was within the 7 to 9 pH range, which is ideal for sustaining healthy aquatic ecosystems.



Water quality results from 2012 were very similar to previous years and no obvious trends or changes were observed at the Provincial level.

What did Albertans have to say about their AWQA Day experience?

The site was beautiful. The water was glistening. We liked the waterfall. The landscaping around the water was peaceful. We saw lots of different animals including fish, frogs, many different species of birds and aquatic invertebrates. The weather was warm, about 19°C and partly cloudy. We were disappointed to find that the city was spraying chemicals for weed control right next to the wetland when we got there. We are concerned that these chemicals will end up in the water and damaging the health of the wetland. We had a fantastic time and learned a lot about wetlands.

General Stewart School, Grade 5 Class

There was green algae in the water and that severely affected the turbidity. We also found a number of side swimmers, water beetles, boatman and a few dead minnows (sticklebacks). The children were very keen to test the water and were very interactive with their previous knowledge and information about other lakes. They felt it was important to take care of our lakes and keep them clean.

Marion Kaiser and Beach Day children

When asked “What was the highlight of the 2012 AWQA Program?” participants said...

Getting a chance to go out on the land and learn about water with youth and elders.

Using the test tubes and finding and comparing the results.

It was also something different to do and it gives them an appreciation of why we need to take care of our environment.

The opportunity to teach my grandchildren what a watershed was and to learn about aquatic invertebrates.

Exploring local rivers to find spots to sample.

Save your test kit. Each kit can test up to 10 samples and tablets will last for over a year. Supplies from past years can be reused. Additional test kits and tablet refills can be purchased directly from ALMS.



Photo Credit: Arin Dyer

If you would like to continue your involvement in your watershed and water quality activities, please think about:

- joining a local watershed stewardship group, visit www.stewardshipdirectory.com and search for a group near you.
- Consider volunteering with lake sampling through the Alberta Lake Management Society (www.alms.ca) or another non-profit group.
- checking out www.awqa.ca and www.alms.ca to learn more about what we can all do to protect water quality.

AWQA water quality test kits were provided free of charge this year thanks to the generous support of these organizations:



TD Friends of the Environment Foundation



Many thanks to Agriculture and Agri-Food Canada for preparation of maps. Photo and draw prizes were provided by: Wildbird General Store, West Edmonton Mall, City of Edmonton, the Fishing Hole, Optix Print Studio and Custom Framing, and Costco Wholesale.