

# The Ripple

River Valleys Committee, August 7, 2008

## How Clean is Your Community River?

Dog days of summer have arrived, temperatures are forecasted to reach 30C over the next few days and no doubt Calgary's rivers will be busy. But how clean are they for swimming?

This week a Calgary Herald investigation revealed unacceptable levels of coliform at 7 of Calgary's 16 outdoor pools, wading areas and spray parks. The presence of coliforms, an indicator of bacterial contamination, can cause mild to severe illnesses. However, recreational facilities are highly monitored and regular testing usually nips the problem in the bud before "recreational water illnesses" become an issue.

The Calgary Herald investigation raises an interesting question, though. What about the quality of water for waders, swimmers and rafters in the Lower Elbow River, a popular summertime destination?

**Water quality testing for recreational purposes** is not carried out on the Lower Elbow River probably because there are no officially designated beach areas requiring monitoring for recreational use. In fact there is a City bylaw indicating it is illegal, unless permitted, to wade or swim in Calgary's rivers if the river is accessed via public parks.

<http://www.calgary.ca/DocGallery/BU/cityclerks/20M2003.pdf> No. 14.

"No Swimming" signs are posted at popular swimming holes along the Lower Elbow warning people about the potential for poor water quality and other hazardous conditions such as broken glass and changing water levels. However, it appears that the signs are largely ignored, sometimes due to poor citing of signs, and the "No Swimming" aspect is rarely enforced. Basically it is recreating at your own risk.

**Well, here is the scoop on the Lower Elbow.**

There are 85 storm sewers dumping untreated water into the Lower Elbow in the 15 km stretch between the base of the Glenmore Dam and the confluence with the

Bow. Dirty storm water, cross contamination with sewage lines (potentially indicated by a UofC study during 2007), wildlife, dogs, agricultural operations and homelessness are all possible sources of fecal contamination which is measured using E. Coli counts as an indicator.

There are 2 water quality test sites on the Lower Elbow, at Sandy Beach and the 9th Ave bridge SE. At both sites E. Coli is monitored. The results are interesting and not well known. Note that Alberta Surface Water Quality Guidelines for recreational use is 200 counts of E. Coli/100mL.

**In 2007 E. Coli counts (no/100mL) were highest during the summer months at the 9th Ave bridge SE, reported as follows:**

20June07: 436.6; 18July07: 2,420; 15Aug07: 378.4; 12Sep07: 2,419.2

Source: Alberta Environment: 2007 Elbow River at 9th Avenue Bridge Water Quality Database  
<http://envext02.env.gov.ab.ca/crystal/aenv/viewreport.csp?RName=River%20Network%20Station%20Water%20Quality%20Data>

**Similar monthly statistics are not readily available for Sandy Beach (the City test site) however E. Coli ranges are reported for:**

2004 at <1 - 411/100mL; 2005 at <1 - 2,419/100mL; and 2006 at <1 - 25/100mL, based on monthly sampling.

Source: City of Calgary Water Resources, Water Quality Services, Calgary Watershed Report 2004-2006

**In 2007 a citizen science water quality monitoring program, WaterWatch Calgary, recorded the following E. Coli counts (no/100mL) downstream of Sandy Beach:**

7June07: 2,700; 28Jun07: 200; 12July07: 0; 17July07: 1,100; 16Aug07: 200; 28Aug07: 300

Perhaps the next time you dip your toes in the Lower Elbow you might want to think twice before venturing further. Allowing 24 hours to pass after a rainstorm, keeping your head above water, definitely not drinking river water and having a hot soapy shower after swimming are all good precautions to take if one must take the plunge!

**Happy swimming!**

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