

Beaverlodge - CEH

- Used 'current' CR value from *wildlife transfer database*
- Predominantly data id'ed in preparation of:

Hosseini, A., Beresford N.A., Brown, J.E. , Jones, D.G., Phaneuf, M., Thørring H. & Yankovich, T. Background dose-rates to reference animals and plants arising from exposure to naturally occurring radionuclides in aquatic environments. *J. Radiological Prot.*

- Fish Ra & Po; bivalve-mollusc Po

	Database	ERICA
Fish Ra	9.8E+1	8.0E+1
Fish Po	4.2E+3	2.4E+2
Bivalve mollusc Po	1.32E+5	3.8E+4

Media concentrations v's ERICA EMCLs

Water								
Area	Site	Date		Pb210 Bq/L	Po210 Bq/L	Ra226 Bq/L	Th230 Bq/L	U-238 Bq/L
Fulton creek watershed	Fulton Lake	2004	mean	2.00E-02	7.50E-03	6.50E-03	6.50E-02	1.53E-02
Fulton creek watershed	Greer Lake	2004	mean	1.25E-01	5.00E-02	2.15E+00	3.50E-02	6.04E+00
Ace creek watershed	Verna Lake	2001	mean	2.10E-01		1.00E-01		5.52E+00
Athabasca Lake	Elliott Bay	2006	mean			7.00E-03		2.44E-03
Beaverlodge Lake	Keddy Bay	2006	mean	2.00E-02		1.50E-02	1.00E-02	1.95E+00
Beaverlodge Lake	Ace Bay	2006	mean	5.00E-02		4.50E-02		1.96E+00
Beaverlodge Lake	Fulton Bay	2006	mean	2.00E-02		1.15E-01		2.41E+00
Lake Athabasca	Dixon bay	2005	mean	2.00E-02	5.00E-03	5.00E-03	1.00E-03	4.88E-03
Lake Athabasca	back bay	2005	mean	8.00E-02	4.00E-02	7.90E-01	1.10E-01	1.34E-01
Lake Athabasca	Zeemel Bay	2005	mean	2.00E-02	5.00E-03	2.00E-02	1.00E-02	2.69E+00
Lake Athabasca	Langley Bay	2005	mean	4.00E-02	3.00E-02	1.40E-01	6.50E-02	1.59E-02
Lake Athabasca	St. Mary's channel	2005	mean	5.50E-02	1.00E-02	6.00E-03	1.50E-02	1.34E-02
Ace Creek Watershed	Dubyna Lake (shallow)	2002	mean					
Ace Creek Watershed	Dubyna Lake deep	2002	mean	5.00E-02	3.00E-02	1.00E-01	1.00E-02	7.16E+00
Ace Creek Watershed	Schmoo Lake Deep	2002	mean	2.00E-02	5.00E-03	5.00E-03	1.00E-02	9.77E-03
Beaverlodge Lake	Hanson Bay	2004	mean	1.52E-01		3.89E-02	1.00E-02	1.87E+00
				7.87E-02	2.71E-03	1.40E-02	3.10E-02	4.93E-02
				Phytoplankton	Bivalve mollusc	Vascular plant	Phytoplankton	Vascular pla

Media concentrations v's ERICA EMCLs

Sediment								
Area	Site	Date		Pb210	Po210	Ra226	Th230	U-238
				Bq/kg dw	Bq/kg dw	Bq/kg dw	Bq/kg dw	Bq/kg dw
Fulton creek watershed	Fulton Lake	2004	mean	8.20E+01	8.20E+01	3.60E+01	2.40E+01	2.03E+01
Fulton creek watershed	Greer Lake	2004	mean	4.76E+04	4.78E+04	4.54E+04	2.32E+04	2.66E+04
Ace creek watershed	Verna Lake	2001	mean	1.27E+04		6.13E+03		4.35E+04
Athabasca Lake	Elliott Bay	2006	mean			7.33E+01		9.97E+01
Beaverlodge Lake	Keddy Bay	2006	mean			8.60E+02		1.61E+03
Beaverlodge Lake	Ace Bay	2006	mean			3.43E+03		2.13E+03
Beaverlodge Lake	Fulton Bay	2006	mean	4.73E+03		1.52E+03		2.45E+03
Lake Athabasca	Dixon bay	2005	mean	1.30E+02	1.38E+02	3.60E+01	7.40E+01	6.18E+01
Lake Athabasca	back bay	2005	mean	2.50E+04	1.87E+04	2.40E+04	3.50E+04	1.01E+03
Lake Athabasca	Zeemel Bay	2005	mean	2.80E+02	2.40E+02	3.00E+02	4.10E+02	2.50E+03
Lake Athabasca	Langley Bay	2005	mean	1.30E+04	1.33E+04	1.63E+04	4.73E+04	1.17E+03
Lake Athabasca	St. Mary's channel	2005	mean	2.60E+02	2.10E+02	1.60E+02	7.20E+02	9.40E+02
Ace Creek Watershed	Dubyna Lake (shallow)	2002	mean	6.46E+03	5.75E+03	1.53E+03	7.49E+02	3.04E+04
Ace Creek Watershed	Dubyna Lake deep	2002	mean	3.06E+04	2.98E+04	5.48E+03	1.74E+03	4.65E+05
Ace Creek Watershed	Schmoo Lake Deep	2002	mean	3.96E+02	4.10E+02	6.00E+01	4.25E+01	2.38E+02
Beaverlodge Lake	Hanson Bay	2004	mean	1.75E+03		9.71E+02	7.27E+03	1.83E+04
	EMCL			1.24E+03	9.17E+03	4.20E+01	1.42E+02	3.75E-01
				Phytoplankton	Bivalve mollusc	Vascular plant	Phytoplankton	Vascular plant