

Battle River Watershed Alliance (BRWA)
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Connecting
 People
 to Place
 for Action

Battle River Water Quality Data

Water Quality Index Scores & Surface Water Quality Compliance

Long-Term River Network - Water Quality Index Scores

Between 2003 and 2016, two Long-Term River Network (LTRN) monitoring stations on the Battle River collected Alberta River Water Quality Index Scores. The LTRN stations are located:

- 1) upstream of Ponoka, downstream of highway 53; and
- 2) upstream of Driedmeat Lake at highway 21.

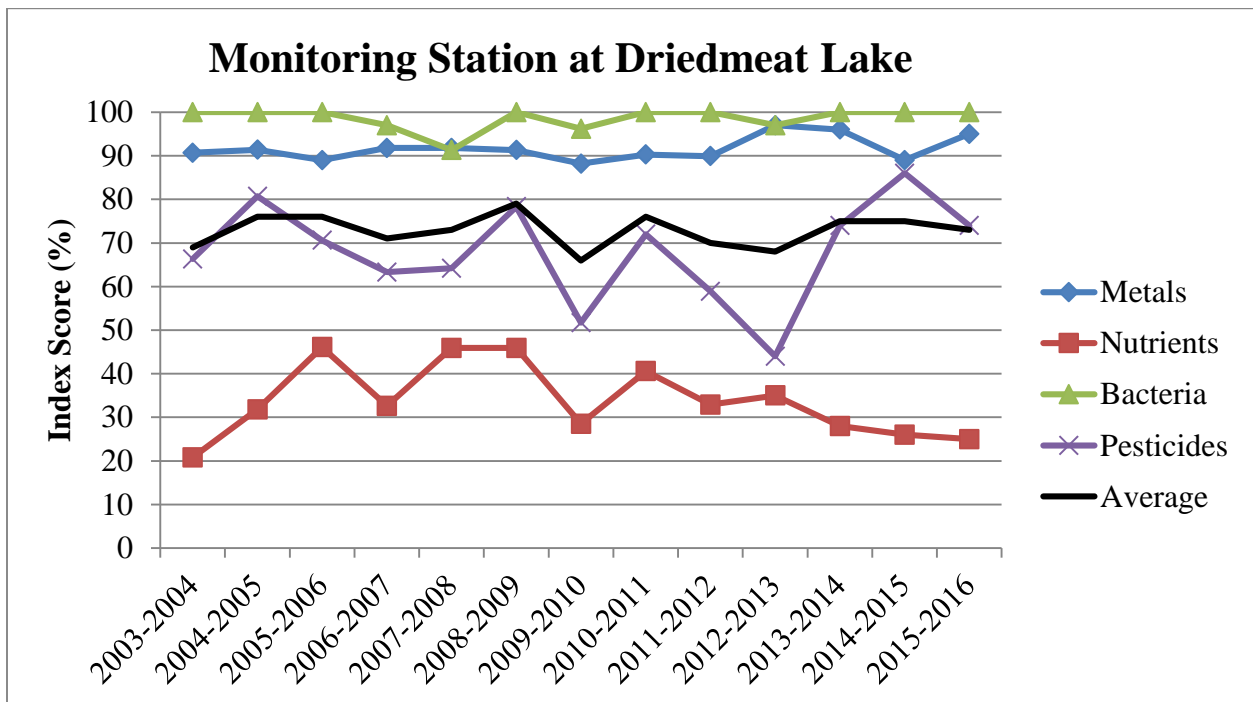
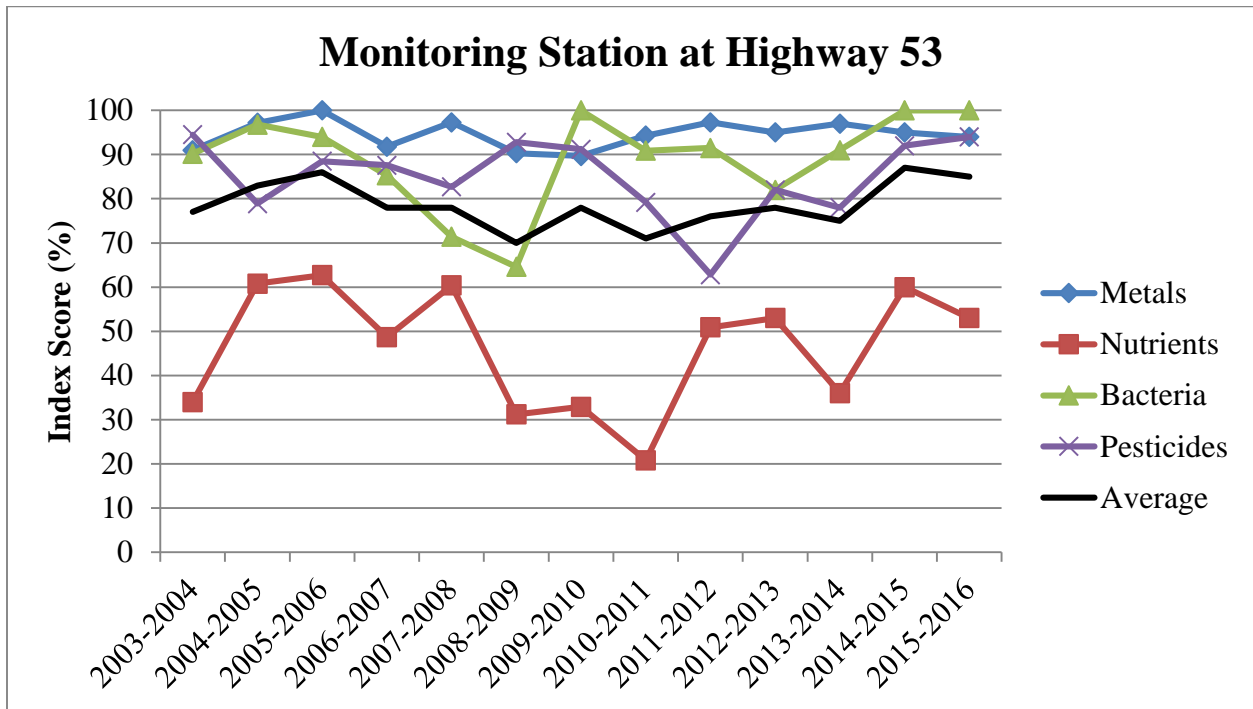
Index Values		
	Excellent (96-100)	Guidelines almost always met; best quality
	Good (81-95)	Guidelines occasionally exceeded, but usually by small amounts; threat to quality is minimal
	Fair (66-80)	Guidelines sometimes exceeded by moderate amounts; quality occasionally departs from desirable levels
	Marginal (46-65)	Guidelines often exceeded, sometimes by large amounts; quality is threatened, often departing from desirable levels
	Poor (0-45)	Guidelines almost always exceeded by large amounts; quality is impaired and well below desirable levels; worst quality

See the results of this data collection in table and chart format below.

Results (Table)

Location	Sub-Index Values				Overall Index
	Metals	Nutrients	Bacteria	Pesticides	
2015-2016					
Highway 53	94	53	100	94	85
Driedmeat Lake	95	25	100	74	73
2014-2015					
Highway 53	95	60	100	92	87
Driedmeat Lake	89	26	100	86	75
2013-2014					
Highway 53	97	36	91	78	75
Driedmeat Lake	96	28	100	74	75
2012-2013					
Highway 53	95	53	82	82	78
Driedmeat Lake	97	35	97	44	68
2011-2012					
Highway 53	97	51	92	63	76
Driedmeat Lake	90	33	100	59	70
2010-2011					
Highway 53	94	21	91	79	71
Driedmeat Lake	90	41	100	72	76
2009-2010					
Highway 53	90	33	100	91	78
Driedmeat Lake	88	29	96	52	66
2008-2009					
Highway 53	90	31	65	93	70
Driedmeat Lake	91	46	100	78	79
2007-2008					
Highway 53	97	60	71	83	78
Driedmeat Lake	92	46	91	64	73
2006-2007					
Highway 53	92	49	85	88	78
Driedmeat Lake	92	33	97	63	71
2005-2006					
Highway 53	100	63	94	89	86
Driedmeat Lake	89	46	100	71	76
2004-2005					
Highway 53	97	61	97	79	83
Driedmeat Lake	91	32	100	81	76
2003-2004					
Highway 53	91	34	90	95	77
Driedmeat Lake	91	21	100	66	69

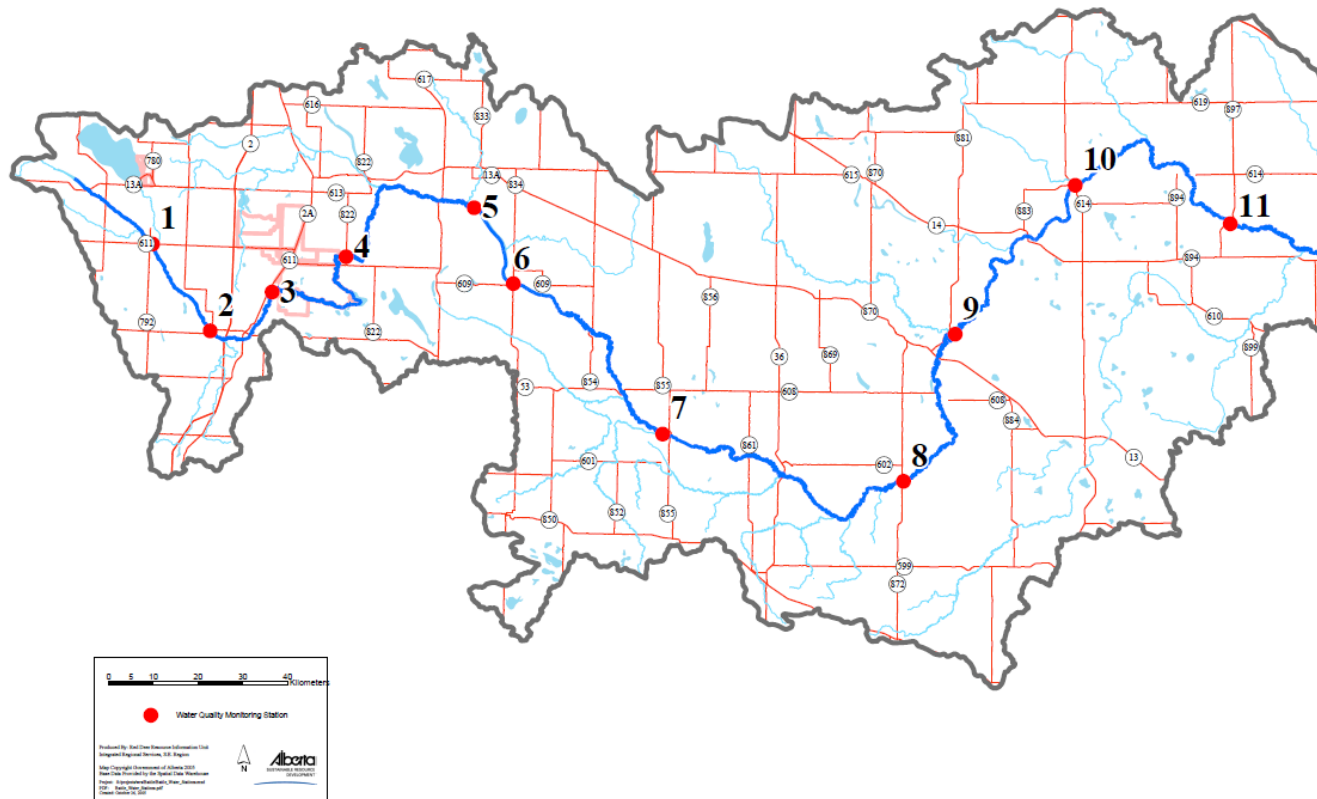
Results (Chart)



Water Quality Compliance with Surface Water Quality Guidelines December 2004 – October 2005. Alberta Environment, 2005

Between December 2004 to October 2005, Alberta Environment collected surface water quality data at 11 sites along the Battle River. The site was given a score based on the compliance with the Canadian Water Quality Guidelines.

Station Locations



Results

Parameter	Guideline	Station Number										
		1	2	3	4	5	6	7	8	9	10	11
Total Phosphorus	Aquatic life (0.05 mg/L)	100	100	100	100	100	100	100	75	63	67	89
Total Nitrogen	Aquatic life (1 mg/L)	33	67	78	89	90	100	89	75	75	33	44
Total ammonia	Aquatic life (calc.)	0	0	11	11	10	0	0	0	0	0	0
Nitrite	Aquatic life (0.06 mg/L)	0	0	22	11	0	0	0	0	0	0	0
Fecal Coliforms	Irrigation (100 per 100 mL)	20	27	10	0	0	30	0	30	40	20	10
Fecal Coliforms	Recreation (200 per 100 mL)	10	0	0	0	0	20	10	10	0	10	10
Dissolved Oxygen	Aquatic life (>5.0 mg/L)	0	18	30	10	27	40	30	0	20	30	30
pH	Aquatic life (6.5-8.5)	0	0	40	40	27	50	10	0	0	0	0
	Canadian Water Quality Guidelines exceeded more than 50% of the time											
	Canadian Water Quality Guidelines exceeded up to 50% of the time											
	Canadian Water Quality Guidelines never exceeded											

Results interpreted:

Canadian Water Quality Guidelines for phosphorus were exceeded more than 50% of the time at all stations and 100% of the time at seven of the stations. Guidelines for nitrogen were also exceeded more than 50% of the time at all but one of the stations. Other water quality issues of concern include low levels of dissolved oxygen, as well as pH levels and fecal coliform counts that sometimes exceed guidelines. (BRWA, State of the Watershed Report, pg. 39, 2011)

Collecting water quality data is an important step in understanding the health of our watershed, and taking wise actions to preserve it.

For more information about our work at www.battleriverwatershed.ca

