

Turtle Lake Water Quality 2004-2007

Lorelei Benoit
Ecologist
Saskatchewan Watershed Authority
2008



Turtle Lake

Joined the Lake Stewardship Program:

October 15th, 2003

Sampling Period:

6 times/year for 4 years (2004-2007)

Status:

Good baseline water quality data!

How did it go?

- Volunteers met with SWA staff to collect water quality data at the baseline station
- Water samples were analyzed by the SRC and the Provincial Laboratory
- Final results were analyzed by SWA staff who determine the WQI and interpret both field and laboratory results



10408_01_Turtle_Lake_Sampling\Mxd_files\Turtle_Lake.mxd



Water Quality Index (WQI)



- WQI uses a mathematical equation to determine a 'score'
- Based on up to 16 parameters tested
- Used to compare overall water quality to previous years
- Allows us to see which parameter exceeds water quality objectives

Water Quality Parameters



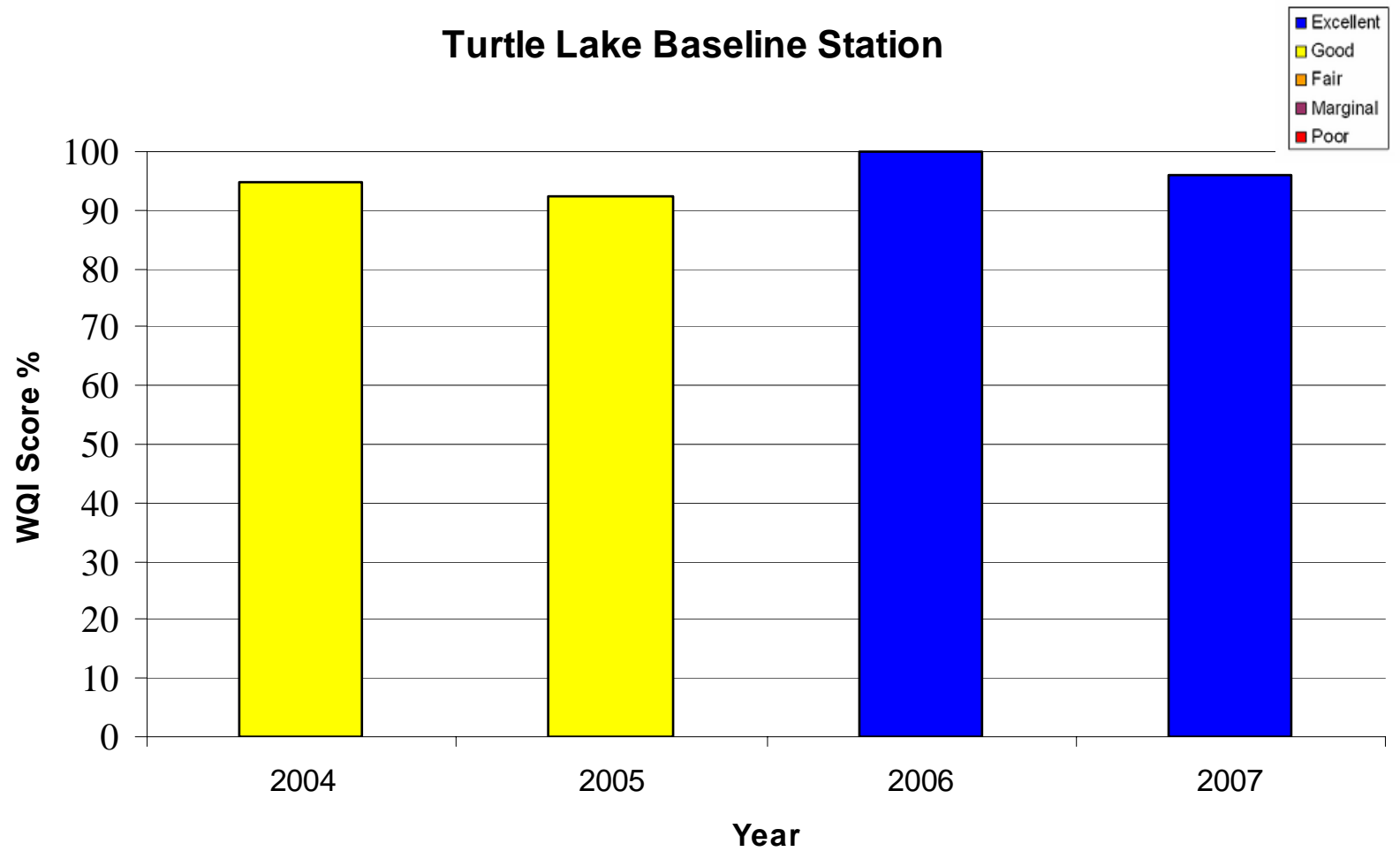
Parameters
used in the
SWA Water
Quality Index
for
Recreational
Lakes

Water Quality Parameter	
IONS	METALS
Total Dissolved Solids	Total aluminum
Dissolved Sodium	Total chromium
Dissolved Chloride	Total mercury
Sulphate	Total arsenic
NUTRIENTS	HERBICIDES
Total phosphorous	2' 4-D
Total ammonia nitrogen	MCPA
Nitrate/nitrite	
BACTERIA	BIOLOGICAL
Fecal Coliform/Total Coliform/E.coli	Dissolved oxygen
	pH

Turtle Lake WQI 2004-2007



Turtle Lake Baseline Station



Turtle Lake Water Quality

- water quality is protected with only a minor degree of threat or impairment; conditions rarely depart from natural or desirable levels.
- Why?
 - Chromium 0.002 mg/L (>0.001 mg/L)
 - pH >9.0



Information

- Saskatchewan Watershed Authority (www.swa.ca)
- Water Quality Index (Canadian Council of Ministers of the Environment.1999. Water Quality Index 1.0, Technical Report. In: Canadian Environmental Quality Guidelines.1999.Canadian Council of Ministers of the Environment, Winnipeg)
- Saskatchewan Environment, Drinking Water Quality Section.2006. Surface Water Quality Objectives: Interim Edition EPB 356.p.7.

Questions?

