

REPORT CARD EXPLANATION

Introduction

The site report cards are one-page summaries of the previous year's water quality and relevant environmental observations. There are two main components of the report cards: Water Quality Grades and Key Facts. The Water Quality Grades section assigns a letter grade to each water quality parameter. These are then averaged to calculate the overall site letter grade. The Key Facts are not part of the overall grade, but are intended to provide context and interesting background information. The purpose of this site report card explanation document is to provide meaning behind the grades and information presented on the report cards. For in-depth methodology, see the [Report Card Methodology](#) document.

Grading Scheme

The grading scheme used in the site report cards is similar to that from grade schools; this is for ease of interpretation. Below are the percentage values corresponding to each letter grade:

- A+ (90-100%)
- B (70-79%)
- D (50-59%)
- A (80-89%)
- C (60-69%)
- F (<50%)

Although variable methodologies were used to calculate the percentage scores for each parameter, in general they were calculated using: $((\text{number of passes}/\text{number of fails}) * 100)$.

Recreational E. coli

Regional health authorities designate recreational water quality guidelines. These include thresholds, below which, few people get sick from recreating in the water. Report card E. coli results were assigned a "pass" if they were below the regional threshold and a "fail" if they were above.

Environmental E. coli

The impact of E. coli on ecosystem/human/wildlife health increases along with its concentration. For that reason, environmental E. coli was calculated using many different thresholds, rather than just one as in recreational E. coli calculations. See more in the [Report Card Methodology](#).

Dissolved Oxygen

Dissolved oxygen is important for healthy ecosystems because most aquatic animals require oxygen to survive. Dissolved oxygen results were assigned a "pass" if they were above 6 mg/L.

Conductivity

Conductivity is the speed of an electrical current passing through water. Pollutants in the water increase the speed of the current, making conductivity an excellent indicator of water pollution. Conductivity readings above 500 mS/m failed.

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pH

pH stands for the “potential for hydrogen” in the water. pH levels can vary from water body and type, but freshwater generally ranges from 6.5-8.5. Appropriate pH levels in the water allow for nutrient availability for aquatic life and can aid in heavy metals being able to dissolve. If pH is too low, it can negatively impact fish eggs and macroinvertebrates.

Clarity

Clarity is a measure of how much light penetrates the water column. Clear water is necessary for the survival of algae, fish, and other wildlife. Poor water clarity can be caused by sediments and overgrowth of algae from nutrient loading. In freshwater, a passing clarity measurement was set to below 1.8m, and in freshwater it was set to below 1.3m.

Chlorine

Chlorine does not naturally occur in the water. If chlorine is detected, it has entered the ecosystem from human sources, including water treatment plants. If chlorine levels remain elevated in water bodies for a long time it can harm wildlife. Chlorine failed if it was detected above 0.5 ppm.

Sewage Debris

If sewage debris is present, it can indicate that a combined sewer recently overflowed nearby. Sewage debris was assigned a “pass” if there was none observed at the site that day.

Aesthetics

The aesthetics score considers observations that impact recreational site use. These include: water colour, water odour, water surface appearance, and turbidity. If a site scores low in aesthetics, it’s likely not very appealing as a destination to swim or enjoy the water.

Site Facts: Trash

The top 5 trash types were determined from the most frequently observed trash. Their relative abundance was then calculated to determine the percentage of times they each were observed in the “no trash”, “some trash”, “more trash”, or “lots of trash” abundance categories.

Other Site Facts

The “Other Site Facts” summarizes the environmental observations at the site. Depending on the site’s findings and goals, this varies between report cards, but may include: wildlife highlights, recreation summaries, sewage debris summaries, and water quality highlights. The site facts provide helpful context and extra evidence to form recommendations.