



Drinking Water Quality Index Report

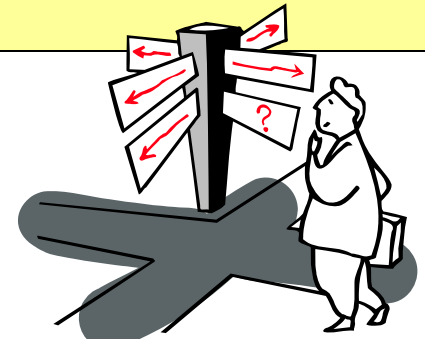
How is this helpful?

Annette Tobin, P.Eng.
Drinking Water Section
March 24, 2010

Quarterly and Annual Reports

- Positively received
- Limited ability to interpret results
- Most consumers:

“What is the quality of my drinking water?”



Quarterly and Annual Reports

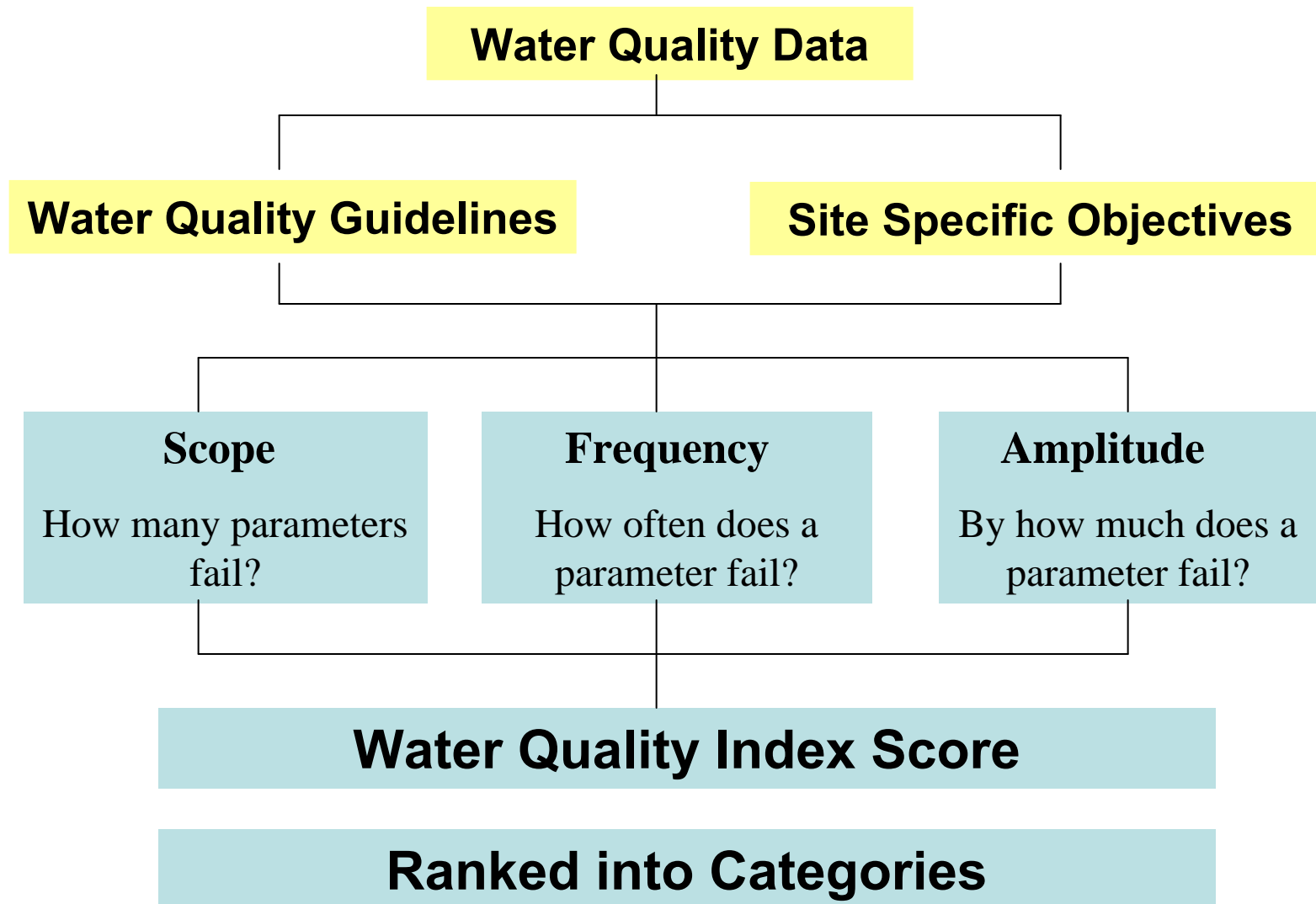
- DWQI - communications tool

Simplify the drinking water quality results without challenging the integrity of the data

DWQI – What is it?

- Very simple and logical approach to reporting water quality data
- Provide meaningful summaries of data
- Transparent
- Customizable
 - Allows incorporation of expert opinion
- Based on ***Canadian Drinking Water Quality Guidelines***
- Not a substitute for statistical analysis of water quality data

DWQI – How does it work?



DWQI – How does it work?

Scope $F1 = \frac{\text{Number of failed variables}}{\text{Total Number of variables}} \times 100$

Frequency $F2 = \frac{\text{Number of failed variables}}{\text{Total number of tests}} \times 100$

$F3 = \frac{\text{nse}}{0.01\text{nse} + 0.01}$ (nse = normalized sum of excursions)

Amplitude $\text{nse} = \frac{\sum \text{excursions}}{\# \text{ of tests}}$

excursion = $\frac{\text{FailedTestValue} - 1}{\text{Objective}}$ (must not exceed)

excursion = $\frac{\text{Objective}}{\text{FailedTestValue}} - 1$ (must not fall below)

$$\text{WQI} = 100 - \frac{\sqrt{F1^2 + F2^2 + F3^2}}{1.732}$$

DWQI - Categories

Ranking	DWQI Value
Excellent	95 – 100
Very Good	89 – 94
Good	80 – 88
Fair	65 - 79
Marginal	45 - 64
Poor	0 - 44

Interpretation of Categories

- **Excellent**
 - Water quality is protected with a virtual absence of impairment; conditions very close to pristine levels; these index values can only be obtained if all measurements meet recommended guidelines virtually all of the time.
- **Very Good**
 - Water quality is protected with a slight presence of impairment; conditions are close to pristine levels.
- **Good**
 - Water quality is protected with only a minor degree of impairment; conditions rarely depart from desirable levels.
- **Fair**
 - Water quality is usually protected but occasionally impaired; conditions sometimes depart from desirable levels.

Ranked with No Qualifiers

Based on the 6 most recent tap samples your drinking water quality is ranked as follows:

DWQI Score = **97**

DWQI Ranking = **excellent**

Ranked with Aesthetic Qualifiers

Based on the 6 most recent tap samples your drinking water quality is ranked as follows:

DWQI Score = **92**

DWQI Ranking = **very good**

AESTHETIC: The perceived water quality may be lower due to the exceedance of the following aesthetic parameters in your last sample: - COLOR, IRON, MANGANESE (Please see Tap Water report for details).

Not Ranked Due to BWA

Based on the 6 most recent tap samples your drinking water quality is ranked as follows:

DWQI Score = **Not Given**

DWQI Ranking = **Not Ranked**

BOIL WATER ADVISORY: Drinking water quality was NOT ranked due to the presence of a Boil Water Advisory issued on September 19, 2006 for the following reason: No free chlorine residual detected in the system. (Please contact our regional Medical Officer of Health for more information).

Not Ranked Due to DBPs

Based on the 6 most recent tap samples your drinking water quality is ranked as follows:

DWQI Score = **Not Given**

DWQI Ranking = **Not Ranked**

THM: Drinking water quality was NOT ranked due to the presence of the following THM value which exceeds the current guideline. THM Average = 123.5 ug/L (Please see THM report for details).

HAA: Drinking water quality was NOT ranked due to the presence of the following HAA value which exceeds the current guideline. HAA Average = 143.3 ug/L (Please see HAA report for details).

Not Ranked Due to Contaminant

Based on the 6 most recent tap samples your drinking water quality is ranked as follows:

DWQI Score = **Not Given**

DWQI Ranking = **Not Ranked**

CONTAMINANT: Drinking water quality was NOT ranked due to the presence of the following contaminant in the last tap sample: ARSENIC (Please see Tap Water report for details).

How is this helpful?

■ Ranked Supplies

- Provides input to the town as to the quality of the drinking water.



■ Unranked Supplies

- Helps to identify the major issues in a community's drinking water quality.



What can I do to change it?

- Address the issues identified in the “Not Ranked”
- When the issue is addressed and corrected, the water supply will be ranked in the drinking water quality reports



Where to get help?

Eastern Region:

Floyd Barnes (729-4817)

Annette Tobin (729-7634)

Central Region:

Paul James (292-4220)

Ben Hammond (729-1159)

Western Region:

Christa Ramsay (637-2542)

Labrador Region:

Grace Gillis (896-5542)

Questions?

