

Name _____

Hour _____

Testing the Water

Data Analysis



1. Go to the online Water Testing Calculator at:
<http://www.water-research.net/watrqualindex/waterqualityindex.htm>
 (also found on the Fox River Sanctuary page of our science website at www.myscience8.com)
2. Enter the value for each test based on our results and press "Calculate". Repeat this for each test.
3. Enter the Water Quality Index that you calculated for each test on the overall water quality index chart and press "Calculate". Record values on the chart on page 2.
4. Record the Overall Water Quality of the Fox River on the bottom of page 2.

Our Test Results

Water Test	Test Result
Dissolved Oxygen	6.7 mg/L 71% Saturation
Fecal Coliform	142 colonies / 100mL
pH	7.5 units
B.O.D.	4.7 mg/L
Temperature Difference	15 ° Celcius
Total Phosphate	.96 mg/L
Nitrates	2.53 x 4.4 = 11.13 mg/L
Turbidity	21.57 JTU /feet
Total Solids	450 mg/L

Enter results for each test and press "calculate" to find the "Water Quality Index". Record on next page.

Water Quality Index: Fecal Coli

Chart 2: Fecal Coliform (FC) Test Results

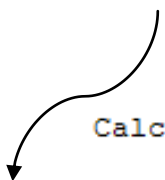
FC: colonies/100 mL
Note: If FC > 10⁵, Q = 2.0

Note: If the number of fecal coliform colonies is greater than 100,000, the quality index equals 2.

Fecal coliform: (colonies/100 ml)

Water quality index:

Enter "Water Quality Index" for each test and press "calculate" to find the "OVERALL Water Quality Index". Record.



Calculation of Overall Water Quality Index

Factor	Weight	Quality Index
Dissolved oxygen	0.17	<input type="text"/>
Fecal coliform	0.16	<input type="text"/>
pH	0.11	<input type="text"/>
Biochemical oxygen demand	0.11	<input type="text"/>
<u>Temperature change</u> Go to This Site to Get Index value	0.10	<input type="text"/>
Total phosphate	0.10	<input type="text"/>
Nitrates	0.10	<input type="text"/>
Turbidity	0.08	<input type="text"/>
Total solids	0.07	<input type="text"/>

Calculate

Based on the factors entered,
the water quality index is .

Based on your calculations (and the chart below), what is the overall quality of the Fox River?

Range	Quality
90-100	Excellent
70-90	Good
50-70	Medium
25-50	Bad
0-25	Very bad

Overall Water Quality is (excellent/good/medium/bad/very bad)
