

# IOWA'S WATER

## Ambient Monitoring Program

### Water Quality Summary 2003\*

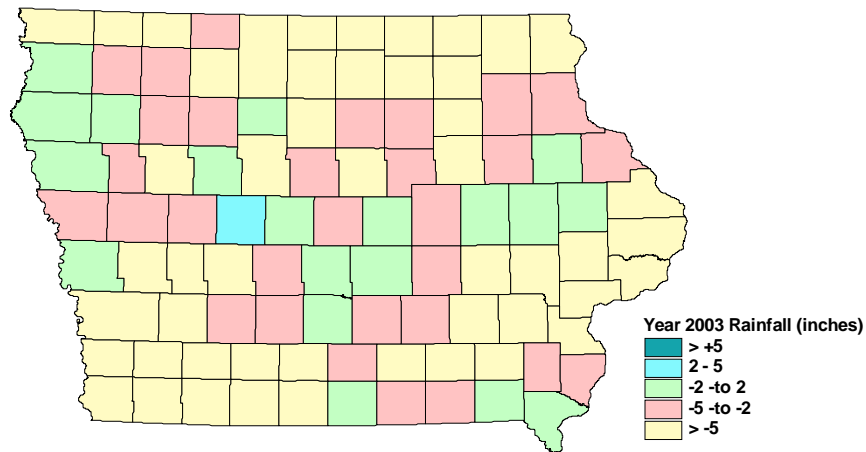
Water Quality Parameter	Units	Number of Samples	Min Value	Percentiles					Max Value
				10th	25th	50th	75th	90th	
Acetochlor	µg/L	998	<0.05	<0.05	<0.05	<0.05	<0.05	0.18	8.6
Alachlor	µg/L	998	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.3
Ammonia (as N)	mg/L	1044	<0.05	<0.05	<0.05	<0.05	0.05	0.19	2.2
Atrazine	µg/L	998	<0.05	<0.05	<0.05	0.087	0.24	0.90	8.1
Butylate	µg/L	998	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbonaceous BOD (5 day)	mg/L	998	<2	<2	<2	<2	3	6	16
Chloride	mg/L	998	5.6	13	18	24	36	50	110
Chlorophyll A	µg/L	1041	<1	3	6	18	49	130	540
Chlorophyll B	µg/L	1041	<1	<1	<1	<1	<1	2	36
Chlorophyll C	µg/L	1041	<1	<1	<1	<1	2	8	54
Corrected Chlorophyll A	µg/L	1039	<1	<1	4	13	42	120	500
Cyanazine	µg/L	998	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.39
Deethylatrazine	µg/L	998	<0.05	<0.05	<0.05	<0.05	0.10	0.14	0.98
Deisopropylatrazine	µg/L	998	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.32
Dimethenamid	µg/L	998	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.66
Diss. Orthophosphate (as P)	mg/L	1044	<0.05	<0.05	<0.05	0.07	0.16	0.32	3.8
Dissolved Oxygen	mg/L	1027	2.5	7.9	9	10.7	13.3	14.6	19.9
<i>E. coli</i> Bacteria	CFU/100 ml	1074	<10	<10	10	80	450	3,300	310,000
Enterococci Bacteria	CFU/100 ml	1072	<10	<10	20	90	390	3,900	250,000
Fecal Coliform Bacteria	CFU/100 ml	1075	<10	<10	10	90	560	4,200	350,000
Field pH	pH units	1026	6.9	7.8	8.1	8.3	8.4	8.6	9.6
Field Temperature	Celsius	1028	0.0	0.2	1.7	11.8	19.4	23.9	29.0
Flow	CFS	895	1	16	54	230	850	2,600	35,000
Metolachlor	µg/L	998	<0.05	<0.05	<0.05	<0.05	0.08	0.26	4.2
Metribuzin	µg/L	998	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate+Nitrite (as N)	mg/L	1044	<0.1	0.4	2.1	4.7	7.9	12.0	27.0
Pheophytin	µg/L	1041	<1	<1	2	4	11	21	190
Silica	mg/L	1041	<1	3.6	6.4	10.0	14.0	18.0	120
Simazine	µg/L	998	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.11
Specific Conductance	µmhos/cm	1044	220	450	530	640	750	880	1,200
Sulfate	mg/L	998	10	22	27	40.5	68	100	330
Total Dissolved Solids	mg/L	1040	140	260	310	360	440	520	800
Total Hardness (as CaCO <sub>3</sub> )	mg/L	998	120	200	250	310	370	430	690
Total Kjeldahl Nitrogen	mg/L	1044	<0.05	0.4	0.6	0.95	1.4	2.2	28
Total Phosphorus	mg/L	1044	<0.05	<0.05	0.1	0.20	0.37	0.66	9.7
Total Suspended Solids	mg/L	1097	<1	3	7	25	76	200	17,000
Trifluralin	µg/L	998	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12
Turbidity	NTU	1041	<1	2.2	4.6	13.0	41.0	100	8,500

µg/L – micrograms per liter (parts per billion)  
 mg/L – milligrams per liter (parts per million)  
 CFU/100 ml – Colony Forming Units per  
 100 milliliters of water

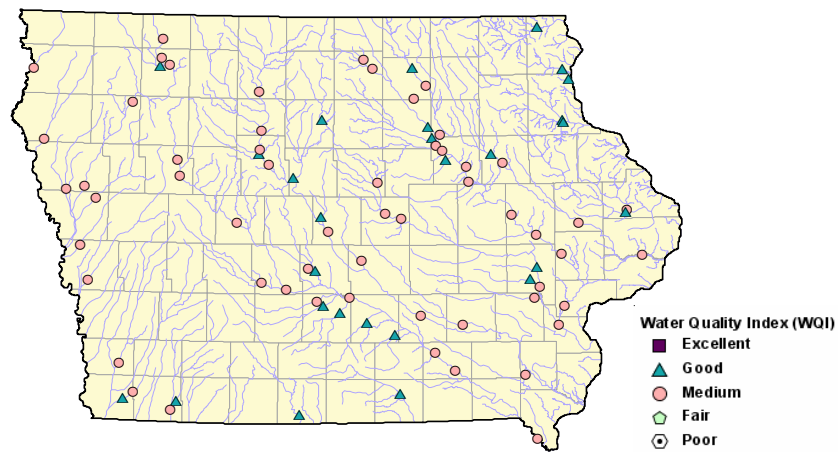
CFS – Cubic Feet per Second (ft<sup>3</sup>/sec)  
 µmhos/cm – micromhos per centimeter  
 NTU – Nephelometric Turbidity Units  
 < – less than detection limit shown

\*Includes monthly and event samples for all stream sites.

## Departure from Long-Term Average Annual Rainfall



Source: *Harry Hillaker*, State Climatologist, Iowa Department of Agriculture & Land Stewardship.



### Water Quality Index

In 1970, the National Sanitation Foundation developed the Water Quality Index (WQI), a standardized method for comparing the water quality of various water bodies. In Iowa, the WQI is calculated by using eight common water quality parameters (dissolved oxygen, fecal coliform bacteria, pH, 5-day BOD, total phosphorus, nitrate-nitrogen, turbidity, and total dissolved solids). Values range from 0 – 100 and streams are classified as **poor** (0-25), **fair** (25-50), **medium** (50-70), **good** (70-90), or **excellent** (90-100). WQIs were calculated on the streams monitored monthly as part of Iowa's Ambient Water Monitoring Program. For 2003, 68% of the streams had a WQI in the **medium** category while the remaining 32% were in the **good** category.



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