

IOWA'S WATER

Ambient Monitoring Program

Water Quality Summary 2005*

Water Quality Parameter	Units	Number of Samples	Min Value	Percentiles					Max Value
				10th	25th	50th	75th	90th	
Acetochlor	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	<0.05	0.089	7.4
Alachlor	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12
Ammonia (as N)	mg/L	1,052	<0.05	<0.05	<0.05	<0.05	<0.05	0.13	1.7
Atrazine	µg/L	1,006	<0.05	<0.05	<0.05	0.056	0.15	0.39	15
Butylate	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbonaceous BOD (5 day)	mg/L	1,023	<2	<2	<2	<2	2	4	20
Chloride	mg/L	1,032	6.8	14	18	24	30	39	170
Chlorophyll a [†]	µg/L	166	<1	1	2	4	7	20	72
Chlorophyll b [†]	µg/L	166	<1	<1	<1	<1	<1	<1	1
Chlorophyll c [†]	µg/L	166	<1	<1	1	3	6	16	68
Chlorophyll free of pheophytin	µg/L	845	<1	3	6	16	40	100	770
Corrected Chlorophyll a [†]	µg/L	166	<1	<1	1	3	6	16	68
Cyanazine	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Deethylatrazine	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	0.061	0.10	0.51
Deisopropylatrazine	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.15
Dimethenamid	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.8
Diss. Orthophosphate (as P)	mg/L	1,052	<0.02	<0.02	0.04	0.08	0.14	0.25	2.0
Dissolved Oxygen	mg/L	1,045	3.2	7.7	8.6	10.5	13.1	14.3	19.4
<i>E. coli</i> Bacteria	CFU/100 ml	1,163	<10	<10	30	110	330	960	200,000
Field pH	pH units	1,045	7.1	7.9	8.1	8.3	8.4	8.6	9.4
Field Temperature	Celsius	1,047	0.0	0.0	1.6	13.2	21.6	24.9	30.8
Flow**	CFS	783	1	21	90	340	1,200	3,500	25,800
Metolachlor	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	0.061	0.15	3.3
Metribuzin	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate+Nitrite (as N)	mg/L	1,053	<0.05	0.76	3.2	6.0	8.7	11	22
Pheophytin [†]	µg/L	166	<1	<1	<1	1	2	5	15
Silica	mg/L	1,003	<1	4.8	9.7	13	18	21	190
Simazine	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	20
Specific Conductance	µmhos/cm	1,052	260	460	530	620	720	820	1,200
Sulfate	mg/L	1,004	7.4	22	28	39	62	96	260
Total Dissolved Solids	mg/L	1,024	130	260	310	370	440	510	700
Total Hardness (as CaCO ₃)	mg/L	1,004	18	220	260	310	370	420	800
Total Kjeldahl Nitrogen	mg/L	1,052	<0.1	0.4	0.5	0.7	1.0	1.7	27
Total Phosphorus	mg/L	1,053	<0.02	0.07	0.11	0.18	0.28	0.46	9.1
Total Suspended Solids	mg/L	1,603	<1	2	6	16	44	110	8,350
Trifluralin	µg/L	1,006	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.077
Turbidity	NTU	1,029	<1	2.8	6.0	16	32	63	4,100

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 (ft³/sec)

µmhos/cm – micromhos per centimeter

NTU – Nephelometric Turbidity Units

< – less than detection limit shown

* Includes monthly and event samples for all stream sites.

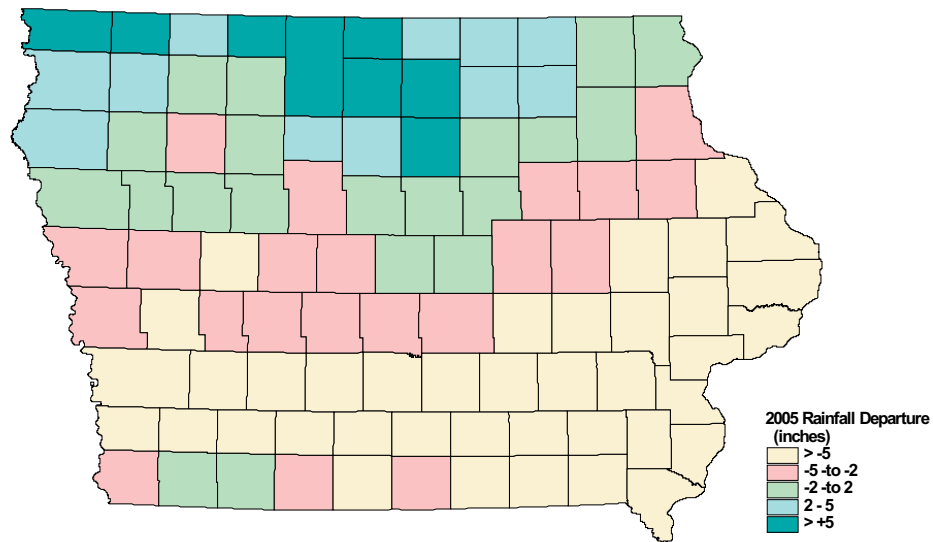
** Provisional data from the U.S. Geological Survey

† Sampling discontinued in March 2005

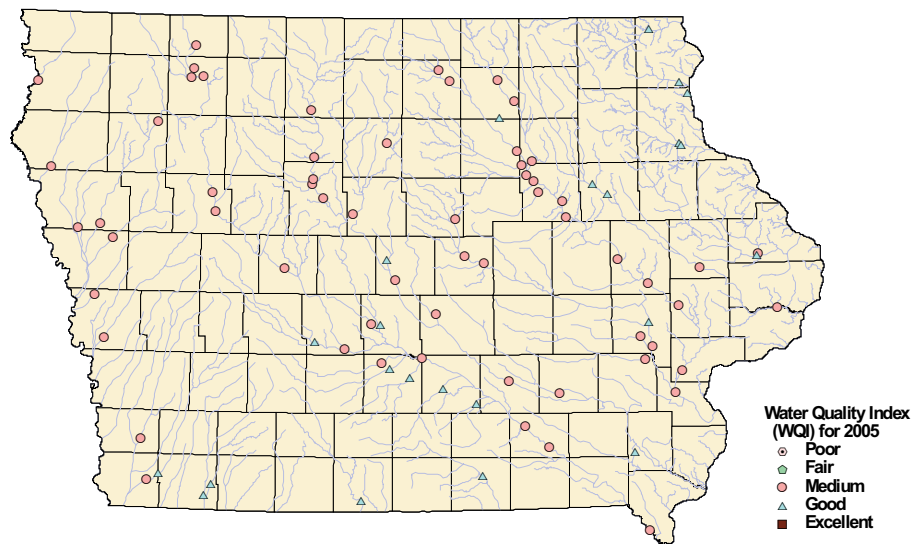
A total of 84 stream sites were sampled monthly.

Raw data are available through STORET
at wqm.igsb.uiowa.edu/iastoret

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 2005, 70% of the streams had a WQI in the **medium** category while the remaining 30% were in the **good** category.



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