Appendix A

Table A-1. NPS Export Coefficients

Parameter	Urban	Agriculture	Forest
BOD5	34-90 (average 62)	26	5
TSS	360-672 (average 466)	1600*	256

*Note: TSS EC on agriculture land is modified using the RUSLE equation.

Table A-2. Population and RF3Lite Segment Lengths by State

State	Population	Total RF3Lite Segment Length
Alabama	4,395,481	17,428.075
Alaska	624,523	0
Arizona	4,894,006	25,308.12
Arkansas	2,566,938	14,330.275
California	33,603,430	27,235.235
Colorado	4,139,027	29,715.86
Connecticut	3,289,062	1,615.165
Delaware	762,227	565.31
District of Columbia	513,618	30.085
Florida	15,341,185	8,184.08
Georgia	7,950,119	18,219.925
Hawaii	1,184,688	0
Idaho	1,273,309	20,762.9
Illinois	12,187,552	19,116.84
Indiana	5,979,311	11,045.41
Iowa	2,877,060	18,809.845
Kansas	2,672,387	29,638.32
Kentucky	3,988,695	14,032.635
Louisiana	4,386,033	9,859.67501
Maine	1,257,219	10,555.36
Maryland	5,212,902	3,261.64
Massachusetts	6,206,482	2,340.99
Michigan	9,907,530	14,896.01

(continued)

Table A-2. (continued)

State	Population	Total RF3Lite Segment Length
Minnesota	4,820,250	26,432.81
Mississippi	2,788,415	12,988.835
Missouri	5,502,243	23,655.775
Montana	885,795	54,897.135
Nebraska	1,672,199	22,222.055
Nevada	1,879,204	11,811.455
New Hampshire	1,215,100	2,535.74
New Jersey	8,192,386	2,366.83
New Mexico	1,750,921	22,290.475
New York	18,223,519	15,388.13
North Carolina	7,762,819	15,900.53
North Dakota	631,032	20,267.665
Ohio	11,281,851	13,537.26
Oklahoma	3,383,158	24,012.525
Oregon	3,356,108	24,845.13
Pennsylvania	11,986,139	13,536.59
Rhode Island	992,011	278.33
South Carolina	3,935,123	10,035.835
South Dakota	734,993	28,963.115
Tennessee	5,539,577	13,440.56
Texas	20,398,490	75,366.515
Utah	2,164,175	17,323.19
Vermont	596,714	2691.94
Virginia	6,945,067	14,427.955
Washington	5,835,089	16,318.4
West Virginia	1,804,812	7,614.28
Wisconsin	5277833	17,848.63
Wyoming	479673	32,885.195

Table A-3. Model Coefficients for the NWPCAM Model

Coefficient Abbreviation	Coefficient Description	Units	Default Value
KBOD	Decay coefficient for BOD	day^{-1}	0.075
KFS	Decay coefficient for fecal streptococci	day^{-1}	0.168
KFC	Decay coefficient for fecal coliform	day^{-1}	0.8
KTN_LOWFLOW	Decay coefficient for total nitrogen where stream flow < 1,000 ft^3/s	day^{-1}	0.3842
KTN_MEDFLOW	Decay coefficient for total nitrogen where stream flow between 1,000 and 10,000 ft^3/s	day^{-1}	0.1227
KTN_HIFLOW	Decay coefficient for total nitrogen where stream flow > 10,000 ft^3/s	day^{-1}	0.0408
KTP_LOWFLOW	Decay coefficient for total phosphorus where stream flow < 1,000 ft^3/s	day^{-1}	0.268
KTP_MEDFLOW	Decay coefficient for total phosphorus where stream flow > 1,000 ft^3/s	day^{-1}	0.0956
KTP_OW	Decay coefficient for total phosphorus where reach is a lake	day^{-1}	0.3586
KNH3	Rate coefficient for oxidation of NH3 to NO3	day^{-1}	0.12
TNH3	Temperature adjustment factor for KNH3	none	1.08
KTON	Rate coefficient for hydrolysis of TON to NH3	day^{-1}	0.075
TTON	Temperature adjustment factor for KTON	none	1.08
KTOP	Rate coefficient for transformation of TOP to PO4	day^{-1}	0.3
TTOP	Temperature adjustment factor for KTOP	none	1.08
NPS_RATIO	Ratio of CBODU to BOD5 for nonpoint sources	mg/L:mg/L	3
CSO_RATIO	Ratio of CBODU to BOD5 for combined sewer overflows	mg/L:mg/L	1.4
SOD1	Sediment oxygen demand for a reach that is not downstream of a point source	g/m^2-d	0.5
SOD2	Sediment oxygen demand for a reach that is downstream of a point source	g/m^2-d	1.5
TBOD	Temperature adjustment factor for KBOD	none	1.047

(continued)

Table A-3. (continued)

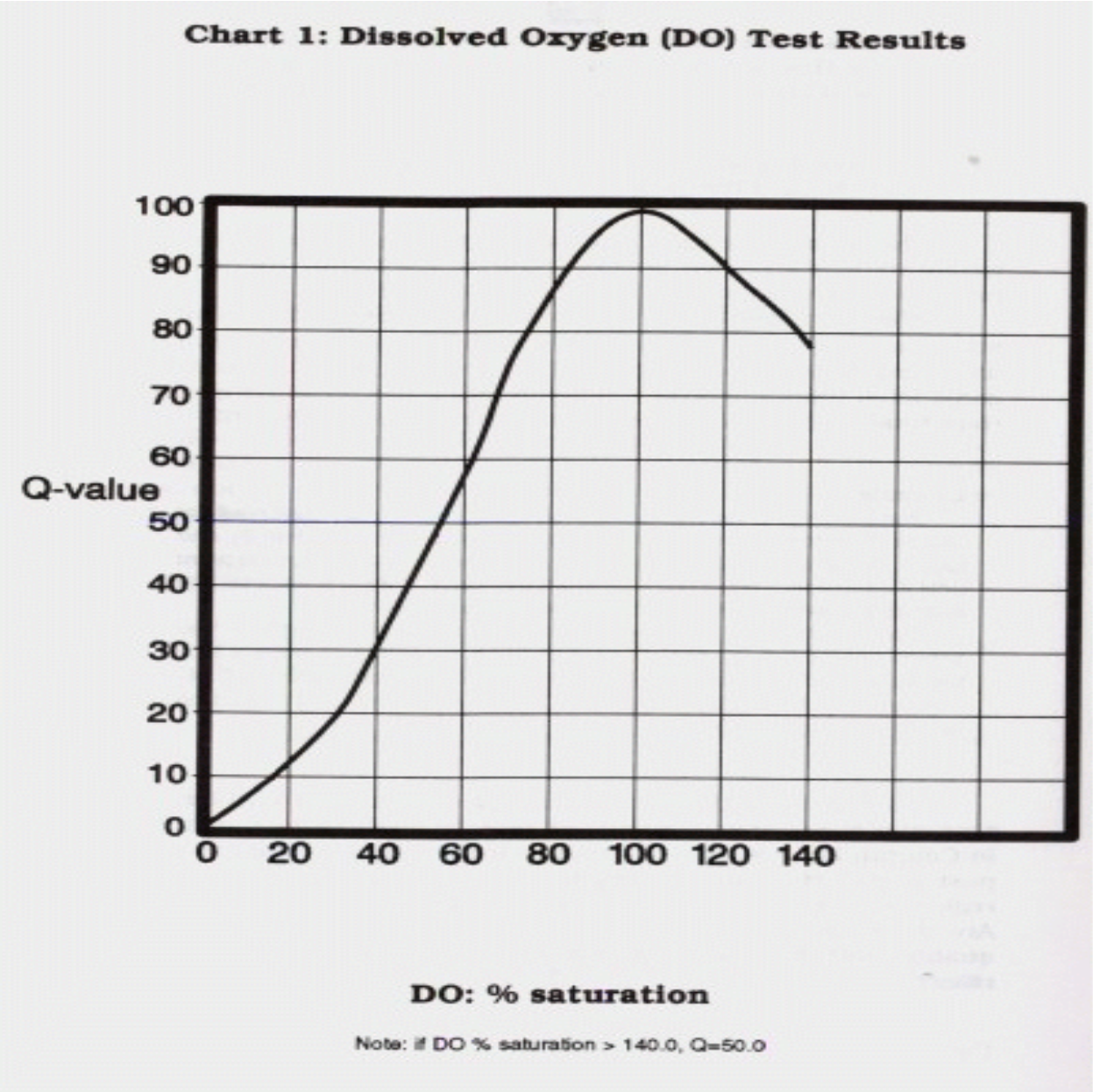
Coefficient Abbreviation	Coefficient Description	Units	Default Value
TSOD	Temperature adjustment factor for SOD1 and SOD2	none	1.06
TK2	Temperature adjustment factor for K2	none	1.024
TFC	Temperature adjustment factor for KFC	none	1.07

Table A-4. Agricultural Slope Factor by Hydroregion

Hydroregion	Agricultural Slope Factor
1	0.47
2	0.37
3	0.50
4	0.68
5	0.37
6	1.00
7	0.97
8	0.48
9	1.07
10	0.50
11	061
12	0.77
13	1.00
14	1.00
15	0.37
16	1.16
17	0.72
18	0.15

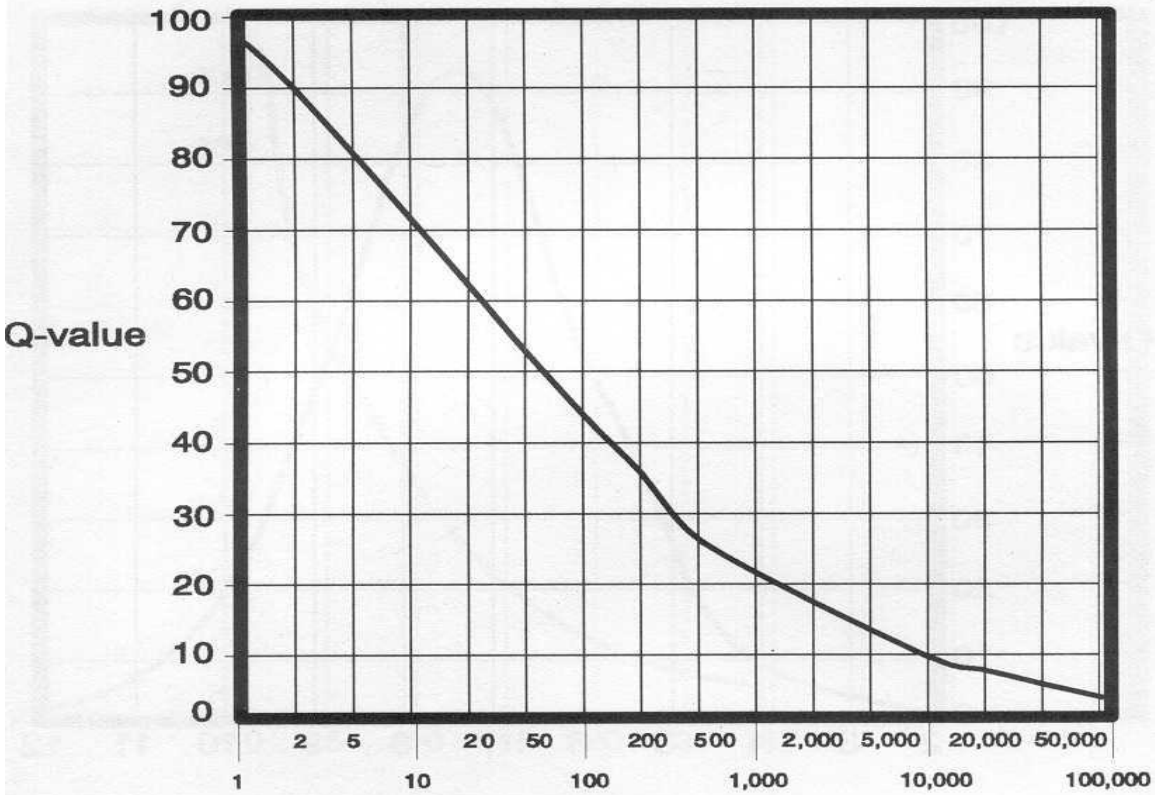
Appendix B

Charts from http://pathfinderscience.net/stream/cp4wqi.cfm.



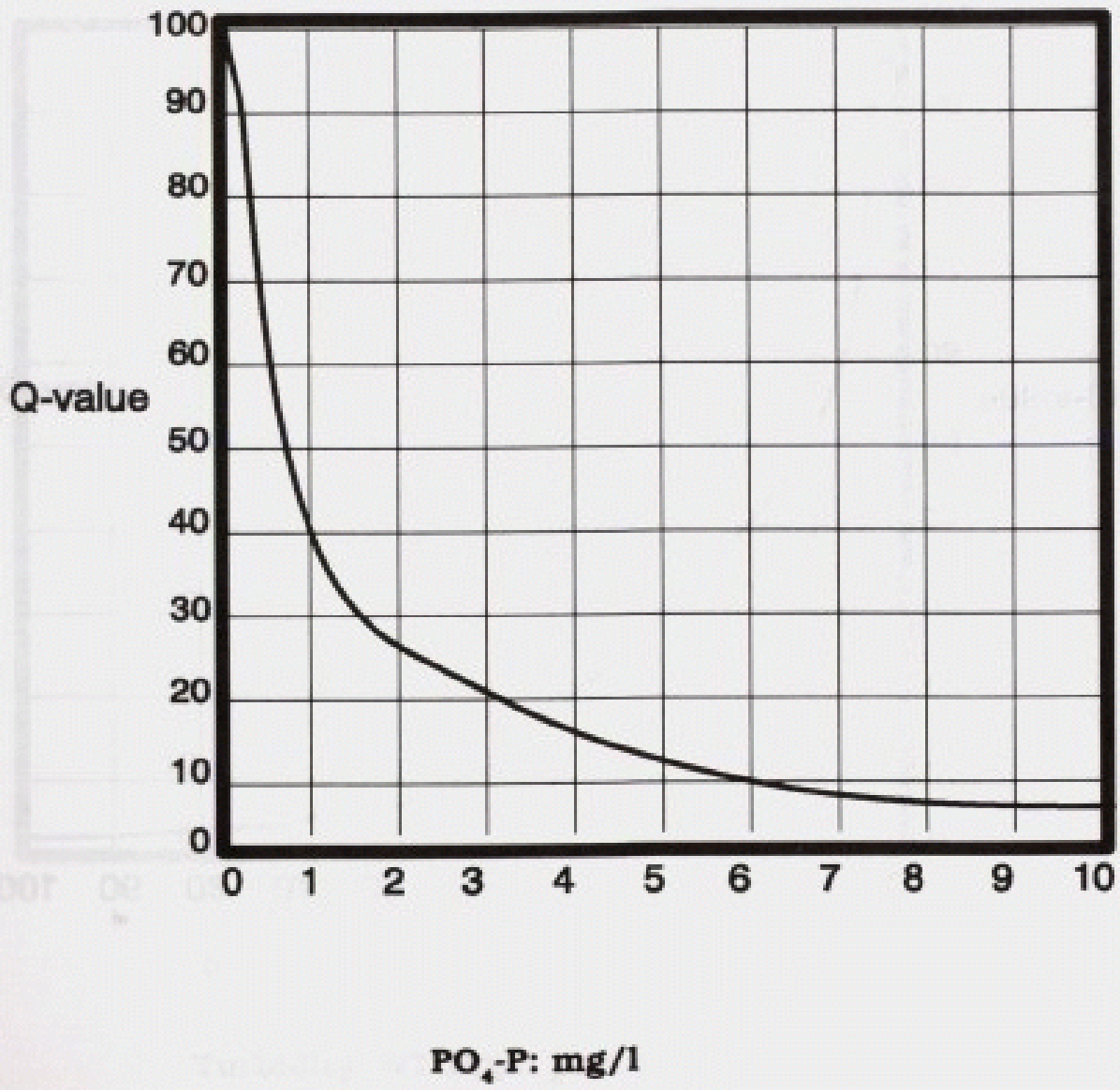
CALCULATING THE RESULTS

Chart 2: Fecal Coliform (FC) Test Results



Note: if FC > 10^5, Q=2.0

Chart 6: Total Phosphate (as PO_4-P) Test Results



Note: if PO_4-P > 10.0, Q=2.0

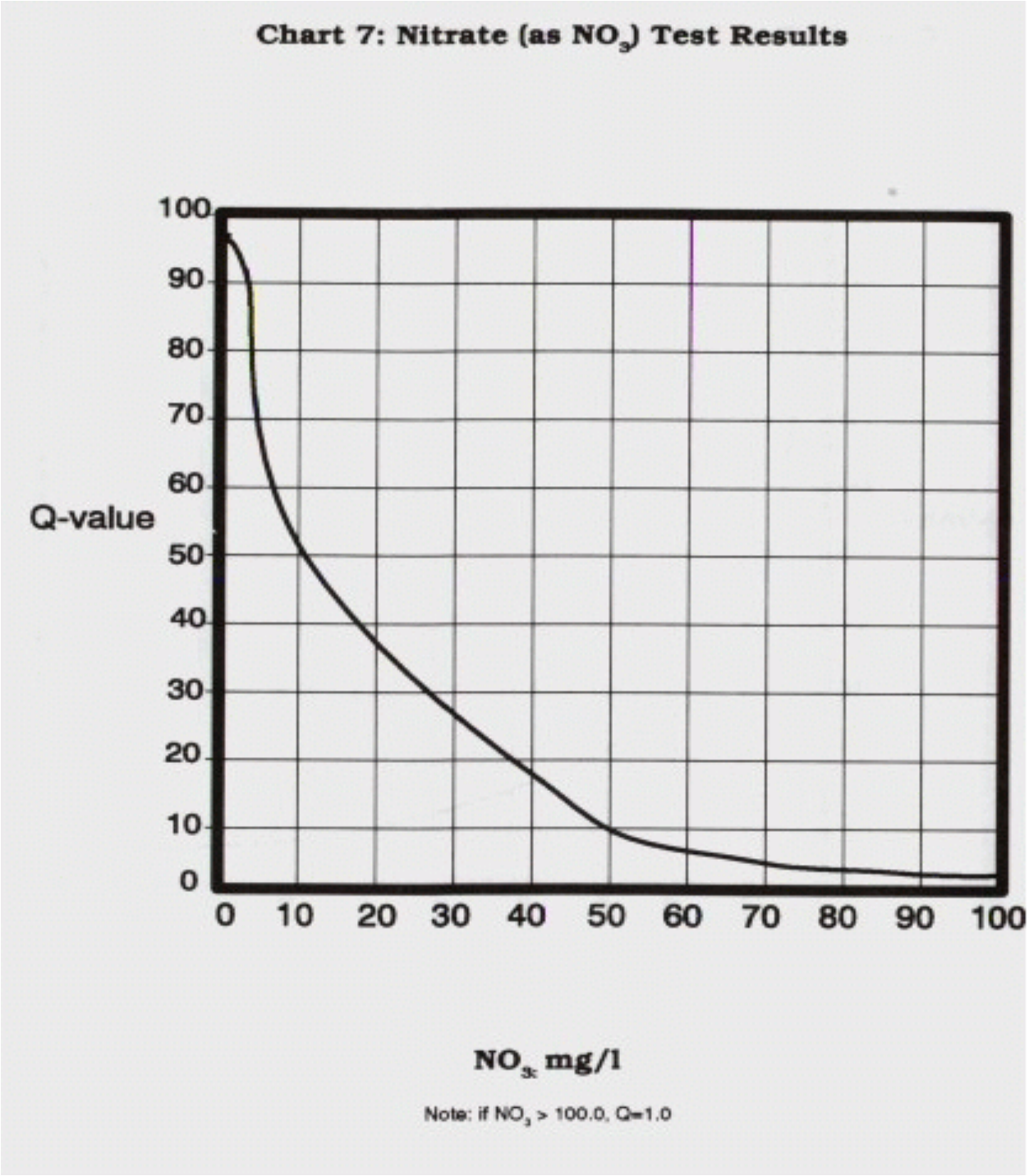
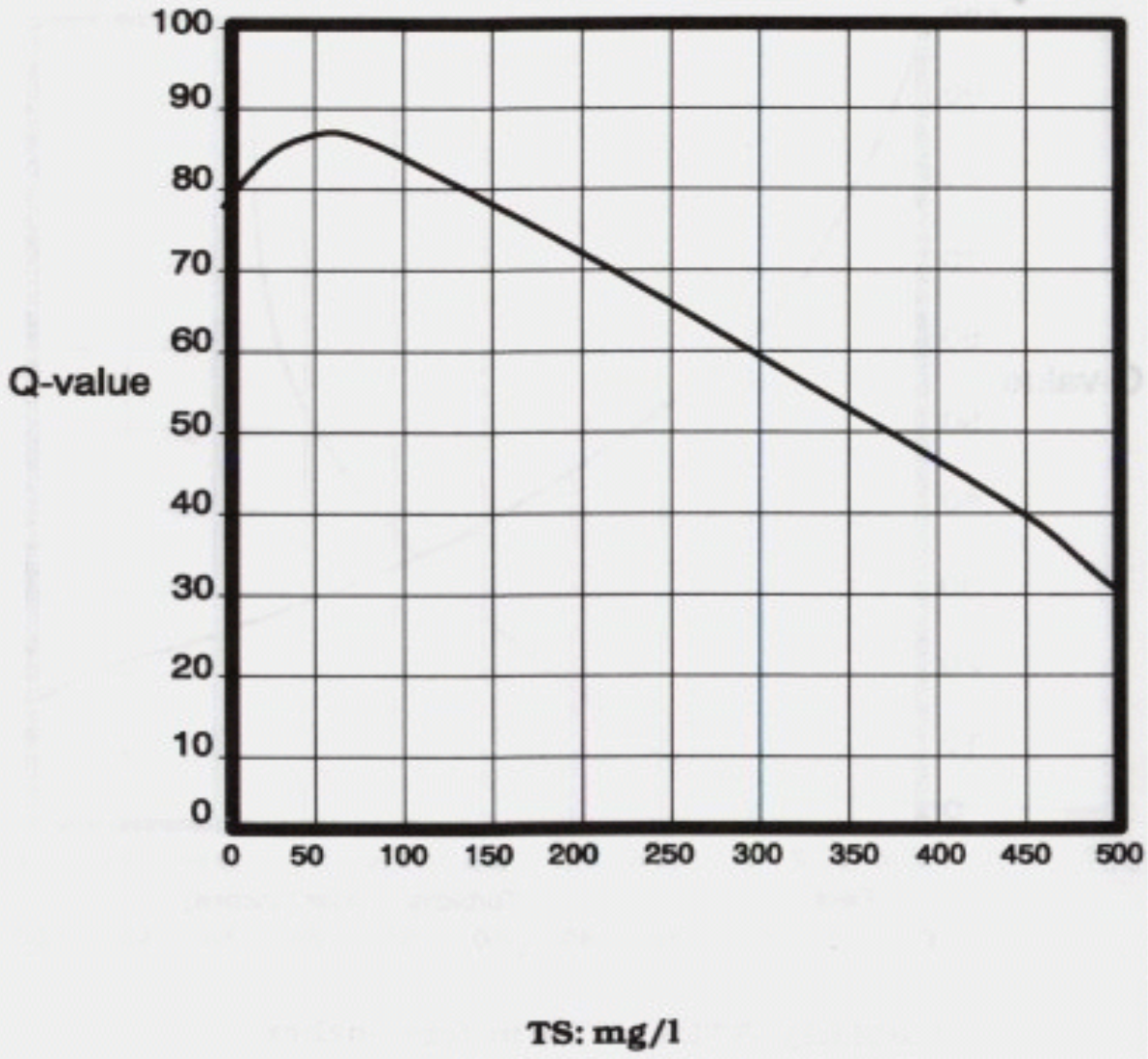


Chart 7: Nitrate (as NO3) Test Results
Q-value
100
90
80
70
60
50
40
30
20
10
0
0 10 20 30 40 50 60 70 80 90 100
NO3, mg/l
Note: if NO3 > 100.0, Q=1.0

Chart 9: Total Solids (TS) Test Results



Note: if TS > 500.0, Q=20.0