**Section 302.412 Total Ammonia Nitrogen**

a) This Section does not apply to the South Fork of the South Branch of the Chicago River (Bubbly Creek).

b) For the Chicago Area Waterway System and the Lower Des Plaines River described in 35 Ill. Adm. Code 303.204 and listed in 35 Ill. Adm. Code 303.220 through 303.240, total ammonia nitrogen must in no case exceed 15 mg/L.

c) The total ammonia nitrogen acute, chronic, and sub-chronic standards are determined in compliance with the equations in subsections (c)(1) and (c)(2). Attainment of each standard must be determined in compliance with subsections (d) and (e) in mg/L.

1) The acute standard (AS) is calculated using the following equation:



2) The chronic standard (CS) is calculated using the following equations:

A) During the Early Life Stage Present period, as defined in subsection (f):

i) When the water temperature is less than or equal to 14.51 ºC:



ii) When the water temperature is above 14.51 ºC:



where:

|  |  |  |
| --- | --- | --- |
| T | = | Water Temperature, degrees Celsius |

B) During the Early Life Stage Absent period, as defined in subsection (f):

i) When the water temperature is less than or equal to 7 ºC:



ii) When the water temperature is greater than 7 ºC:



Where:

|  |  |  |
| --- | --- | --- |
| T | = | Water Temperature, degrees Celsius |

3) The sub-chronic standard is equal to 2.5 times the chronic standard.

d) Attainment of the Total Ammonia Nitrogen Water Quality Standards

1) The acute standard for total ammonia nitrogen (in mg/L) must not be exceeded at any time except in those waters for which the Agency has approved a ZID under Section 302.102.

2) The 30-day average concentration of total ammonia nitrogen (in mg/L) must not exceed the chronic standard (CS) except in those waters in which mixing is allowed under Section 302.102. Attainment of the chronic standard (CS) is determined in compliance with subsection (e) by averaging at least four samples collected at weekly intervals or at other sampling intervals that statistically represent a 30-day sampling period. The samples must be collected in a manner that assures a representative sampling period.

3) The 4-day average concentration of total ammonia nitrogen (in mg/L) must not exceed the sub-chronic standard is except in those waters in which mixing is allowed under Section 302.102. Attainment of the sub-chronic standard is determined in compliance with subsection (e) by averaging daily sample results collected over four consecutive days within the 30-day averaging period. The samples must be collected in a manner that assures a representative sampling period.

e) The water quality standard for each water body must be calculated based on the temperature and pH of the water body measured at the time of each ammonia sample. The concentration of total ammonia in each sample must be divided by the calculated water quality standard for the sample to determine a quotient. The water quality standard is attained if the mean of the sample quotients is less than or equal to one for the duration of the averaging period.

f) The Early Life Stage Present period occurs from March through October. All other periods are subject to the Early Life Stage Absent period, except that waters listed in 35 Ill. Adm. Code 303.240 are not subject to Early Life Stage Present ammonia limits at any time.

BOARD NOTE: Acute and chronic standard concentrations for total ammonia nitrogen (in mg/L) for different combinations of pH and temperature are shown in Appendix C.

(Source: Amended at 47 Ill. Reg. 4437, effective March 23, 2023)