**Section 304.123 Phosphorus**

a) Effluents discharged within the Lake Michigan Basin must not contain more than 1.0 mg/L of phosphorus as P.

b) Effluents from any source that discharges to a lake or reservoir with a surface area of 8.1 hectares (20 acres) or more, or to any tributary of such a lake or reservoir whose untreated waste load is 2500 or more population equivalents, and which does not utilize a third-stage lagoon treatment system as specified in Section 304.120(a) and (c), must not exceed 1.0 mg/L of phosphorus as P; however, this subsection does not apply where the lake or reservoir, including any side channel reservoir or other portion of it, on an annual basis exhibits a mean hydraulic retention time of 0.05 years (18 days) or less.

c) Under Section 28.1 of the Environmental Protection Act (Act) [415 ILCS 5/28.1], the owner or operator of any source subject to subsection (b) may apply for an adjusted standard. In addition to the proofs specified in Section 28.1(c) of the Act [415 ILCS 5/28.1(c)], the application must, at a minimum, contain adequate proof that the effluent resulting from granting the adjusted standard will not contribute to cultural eutrophication, unnatural plant or algal growth or dissolved oxygen deficiencies in the receiving lake or reservoir. For purposes of this subsection, effluent must be deemed to contribute to such conditions if phosphorus is the limiting nutrient for biological growth in the lake or reservoir, taking into account the lake or reservoir limnology, morphological, physical and chemical characteristics, and sediment transport. However, if the effluent discharge enters a tributary at least 40.25 kilometers (25 miles) upstream of the point at which the tributary enters the lake or reservoir at normal pool level, effluent will not be deemed to contribute to such conditions if the receiving lake or reservoir is eutrophic and phosphorus from internal regeneration is not a limiting nutrient.

d) For this Section, the term "lake or reservoir" does not include low-level pools constructed in free-flowing streams or any body of water that is an integral part of an operation that includes the application of sludge on land.

e) Compliance with the limitations of subsection (b) must be achieved by the following dates:

1) Sources with the present capability to comply must do so on the effective date of this Section;

2) All other sources must comply as required their NPDES permits.

f) For purposes of this Section, the following terms have the meanings specified:

1) "Dissolved oxygen deficiencies" means the occurrence of a violation of the dissolved oxygen standard applicable to a lake or reservoir.

(BOARD NOTE: Dissolved Oxygen standards for general use waters are at 35 Ill. Adm. Code 302.206; Dissolved Oxygen standards are at 35 Ill. Adm. Code 302.405 for:

302.405(a): South Fork of the South Branch of the Chicago River (Bubbly Creek);

302.405(b): Upper Dresden Island Pool Aquatic Life Use waters;

302.405(c): Chicago Area Waterway System Aquatic Life Use A waters; and

302.405(d): Chicago Area Waterway System and Brandon Pool Aquatic Life Use B waters.)

2) "Euphotic zone" means that region of a lake or reservoir extending from the water surface to a depth at which 99% of the surface light has disappeared or such lesser depth below which photosynthesis does not occur.

3) "Eutrophic" means a condition of a lake or reservoir in which there is an abundant supply of nutrients, including phosphorus, accounting for a high concentration of biomass.

4) "Eutrophication" means the process of increasing or accumulating plant nutrients in the water of a lake or reservoir. Cultural eutrophication is eutrophication attributable to human activities.

5) "Internal regeneration" means the process of conversion of phosphorus or other nutrients in sediments of a lake or reservoir from the particulate to the dissolved form and the subsequent return of such dissolved forms to the euphotic zone.

6) "Limiting nutrient" means a substance that is limiting to biological growth in a lake or reservoir due to its short supply or unavailability for other substances necessary for the growth of organisms.

7) "Unnatural plant or algal growth" means the occurrence of a violation of the unnatural sludge standard applicable to a lake or reservoir based on growth.

(BOARD NOTE: Unnatural sludge standards for general use waters are at 35 Ill. Adm. Code 302.203; unnatural sludge standards for the Chicago Area Waterway System and Lower Des Plaines River waters are at 35 Ill. Adm. Code 302.403.)

g) Except as provided in subsection (h), any new or expanded discharges into General Use waters from the following treatment works not covered by subsections (b) through (f), are subject to monthly average permit limits for total phosphorus of 1 mg/L:

1) Treatment works with a Design Average Flow of 1.0 million gallons per day or more receiving primarily municipal or domestic wastewater; or

2) Any treatment works, other than those treating primarily municipal or domestic wastewater, with a total phosphorus effluent load of 25 pounds per day or more.

3) For purposes of this subsection:

A) A new discharge means a discharge from a treatment works constructed after February 2, 2006.

B) An expanded discharge means a discharge from any existing treatment works that would be greater than the flow rates permitted before February 2, 2006.

h) Discharges qualifying under subsections (g)(1) and (g)(2) may not be subject to the requirements of subsection (g) if the discharger demonstrates that phosphorus from treatment works is not the limiting nutrient in the receiving water. The Agency may impose alternative phosphorus effluent limits where the supporting information shows that alternative limits are warranted by the aquatic environment in the receiving stream.

i) No additional phosphorus limitations are required under Section 304.105 and 35 Ill. Adm. Code 302.203 for the discharges that comply with the requirements of subsection (g) or (h).

j) The provisions of subsections (g), (h), and (i) apply until the Board adopts a numeric water quality standard for phosphorus and the adopted standard is approved by the USEPA.

k) The averaging rules under Section 304.104(a)(2) and (a)(3) do not apply to permit limits established under subsection (g) or (h).

(Source: Amended at 47 Ill. Reg. 4601, effective March 23, 2023)