

3745-2-10 **Wasteload allocation for ammonia-nitrogen toxicity.**

- (A) For discharges of ammonia-nitrogen (NH₃-N) to flowing receiving waters, the wasteload allocation (WLA) shall be calculated using the following mass balance equation:

$$\frac{WQC (Q_{\text{eff}} + Q_{\text{up}}) - Q_{\text{up}} (WQ_{\text{up}})}{Q_{\text{eff}}}$$

Where:

WQC = water quality criterion as established in rule 3745-2-04 of the Administrative Code;

Q_{eff} = effluent design flow as established in rule 3745-2-05 of the Administrative Code;

Q_{up} = per cent of the upstream design flow as established in paragraph (B) of this rule; and

WQ_{up} = background water quality as established in rule 3745-2-05 of the Administrative Code.

Alternative modeling methods including, but not limited to, continuous simulation or probabilistic analyses, may be used if the director determines that they are appropriate and protective of water quality criteria.

- (B) The following stream design flows shall be used to determine WLAs to maintain water quality criteria for NH₃-N toxicity.
- (1) May to November: 30Q10 for summer chronic aquatic life.
 - (2) December to February: 30Q10 for winter chronic aquatic life.
 - (3) May to November: 7Q10 for summer acute aquatic life.
 - (4) December to February: 7Q10 for winter acute aquatic life.
- (C) The WLAs shall use the per cent of stream design flow contained in paragraphs (A)(2)(a) to (A)(2)(c) of rule 3745-2-05 of the Administrative Code. The director may determine design flows for streams that are impacted by reservoirs or other physical alternations by taking into account relevant site-specific factors. Stream design flows for such impacted stream segments shall be established at levels that ensure protection of designated uses. Alternative flows or seasons may be used if the

director determines that the flow or season is as protective as those listed in paragraph (B) of this rule.

- (D) WLAs to maintain the acute criteria shall be required for streams designated as limited resource water in Chapter 3745-1 of the Administrative Code, or for other streams for which the limited resource water criteria are applicable.
- (E) Exception for direct discharges to lake Erie. If it is necessary to determine a WLA for a direct discharge to lake Erie, the mixing assumptions contained in rule 3745-2-05 of the Administrative Code shall be used.
- (F) Exception for direct discharges to the Ohio river. If it is necessary to determine a WLA for a direct discharge to the Ohio river, the mixing assumptions contained in rule 3745-2-05 of the Administrative Code shall be used.
- (G) Multiple discharges. When the director determines that it is necessary to consider multiple discharges in a WLA, the loading capacity may be distributed among discharges using a method deemed appropriate by the director based on site-specific considerations. This WLA shall be developed pursuant to rule 3745-2-05 of the Administrative Code.

Effective: 6/7/2011

R.C. 119.032 review dates: 11/30/2010 and 6/7/2016

Promulgated Under: R.C. 119.03
Statutory Authority: R.C. 6111.03, 6111.12
Rule Amplifies: R.C. 6111.12
Prior Effective Dates: 10/31/1997