



## Ohio Administrative Code

### Rule 3745-1-39 Methodology for the development of wildlife criteria for the lake Erie drainage basin.

Effective: February 6, 2017

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[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules and federal statutory provisions referenced in this rule, see rule 3745-1-03 of the Administrative Code.]

(A) Requirements for site-specific modifications to criteria and values. Criteria and values adopted in, or developed pursuant to, this chapter may be modified on a site-specific basis to reflect local environmental conditions in accordance with the following provisions. Any such modifications shall be protective of designated uses and aquatic life, wildlife and human health and be submitted to the U.S. EPA for approval. Any site-specific modifications shall be based on a sound scientific rationale. In addition, any site-specific modifications that result in less stringent criteria shall not be likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of such species' critical habitat. More stringent modifications shall be developed to protect threatened or endangered species, where such modifications are necessary to ensure that water quality is not likely to jeopardize the continued existence of such species or result in the destruction or adverse modification of such species' critical habitat. More stringent modifications may also be developed to protect candidate (C1) species being considered by the United States fish and wildlife service for listing under section 4 of the Endangered Species Act, where such modifications are necessary to protect such species.

(B) Aquatic life.

(1) Aquatic life criteria or values may be modified on a site-specific basis to provide an additional level of protection where the toxicity or exposure potential is greater than the toxicity or exposure potential assumptions used to derive the criteria or values in question.

(2) Less stringent site-specific modifications to chronic or acute aquatic life criteria or values may be developed when either of the following occur:



(a) The local water quality characteristics (such as, but not limited to, pH, hardness, temperature or color) lessen the biological availability or toxicity of a pollutant.

(b) The sensitivity of the aquatic organisms species that occur at the site differs from the species actually tested in developing the criteria. The phrase "occur at the site" includes the species, genera, families, orders, classes, and phyla that: are usually present at the site; are present at the site only seasonally due to migration; are present intermittently because they periodically return to or extend their ranges into the site; were present at the site in the past and are not currently present at the site due to degraded conditions but are expected to return to the site when conditions improve; are present in nearby bodies of water and are not currently present at the site due to degraded conditions but are expected to be present at the site when conditions improve. The taxa that "occur at the site" cannot be determined merely by sampling downstream and/or upstream of the site at one point in time. "Occur at the site" does not include taxa that were once present at the site but cannot exist at the site now due to permanent physical alteration of the habitat at the site resulting, for example, from dams.

(3) Less stringent modifications also may be developed to acute and chronic aquatic life criteria or values to reflect local physical and hydrological conditions.

(4) Less stringent modifications to the whole effluent toxicity level for limited resource waters, as specified in rule 3745-2-09 of the Administrative Code, may be applied. Documentation provided by the permittee or independently available to the director shall show that the modification, not to exceed 1.0 acute toxic unit, is protective of the resident aquatic community.

(5) Any modifications to protect threatened or endangered aquatic species required by paragraph (A) of this rule may be accomplished using either of the two following procedures:

(a) If the species mean acute value (SMAV) for a listed or proposed species, or for a surrogate of such species, is lower than the calculated final acute value (FAV), such lower SMAV may be used instead of the calculated FAV in developing site-specific modified criteria.

(b) The site-specific criteria may be calculated using the recalculation procedure for site-specific modifications described in chapter 3 of the "U.S. EPA Water Quality Standards Handbook."



(C) Wildlife.

(1) Wildlife water quality criteria may be modified on a site-specific basis to provide an additional level of protection where the toxicity or exposure potential is greater than the toxicity or exposure potential assumptions used to derive the criteria in question.

(2) Less stringent site-specific modifications to wildlife water quality criteria may be developed provided all the following criteria apply:

(a) The modification demonstration addresses both the mobility of prey organisms and wildlife populations in defining the site for which the modification is developed.

(b) The modification reflects a site-specific bioaccumulation factor.

(c) There is a showing that both:

(i) Any increased uptake of the toxicant by prey species utilizing the site will not cause adverse effects in wildlife populations.

(ii) Wildlife populations utilizing the site or downstream waters will continue to be fully protected.

(3) Any modification to protect threatened or endangered wildlife species required by paragraph (A) of this rule must consider both the mobility of prey organisms and wildlife populations in defining the site for which criteria are developed, and may be accomplished by using the following recommended method:

(a) Use the methodology contained in rule 3745-1-43 of the Administrative Code, substituting appropriate species-specific toxicological, epidemiological, or exposure information, including changes to the BAF.

(b) Use an interspecies uncertainty factor of one where epidemiological data are available for the species in question. If necessary, species-specific exposure parameters can be derived in accordance with rule 3745-1-43 of the Administrative Code.



(c) Apply an intraspecies uncertainty factor (to account for protection of individuals within a wildlife population) in the denominator of the effect part of the wildlife equation contained in rule 3745-1-43 of the Administrative Code in a manner consistent with the other uncertainty factors described in rule 3745-1-43 of the Administrative Code.

(d) Compare the resulting wildlife value for the species in question to the two class-specific wildlife values which were previously calculated, then select the lowest of the three as the site-specific modification.

(D) Bioaccumulation factors.

(1) BAFs may be modified on a site-specific basis, pursuant to the methodology contained in rule 3745-1-41 of the Administrative Code, to larger values where reliable data show that local bioaccumulation is greater than the basin-wide value.

(2) BAFs may be modified on a site-specific basis, pursuant to the methodology contained in rule 3745-1-41 of the Administrative Code, to lower values if any of the following occur:

(a) The fraction of the total chemical that is freely dissolved in the ambient water is different than that used to derive the system-wide BAFs (i.e., the concentrations of particulate organic carbon and the dissolved organic carbon are different than those used to derive the system-wide BAFs).

(b) Input parameters of the Gobas model, such as the structure of the aquatic food web and the disequilibrium constant, are different at the site than those used to derive the system-wide BAFs.

(c) The per cent lipid of aquatic organisms that are consumed and occur at the site is different than that used to derive the system-wide BAFs.

(d) Site-specific field-measured BAFs or biota-sediment accumulation factor (BSAFs) are determined.

(3) Any more stringent modifications to protect threatened or endangered species required by



paragraph (A) of this rule shall be derived using procedures set forth in the methodology contained in rule 3745-1-41 of the Administrative Code.

(E) Human health.

(1) Human health criteria or values may be modified on a site-specific basis to provide an additional level of protection where the toxicity or exposure potential is greater than the toxicity or exposure potential assumptions used to derive the criteria or values in question. Human health criteria or values shall be modified on a site-specific basis to provide additional protection appropriate for highly exposed subpopulations.

(2) Less stringent site-specific modifications to human health criteria or values may be developed when either of the following occur:

(a) Local fish consumption rates are lower than the rate used to derive human health criteria or values under rule 3745-1-42 of the Administrative Code (this option shall not be available for water bodies subject to a fish consumption advisory).

(b) A site-specific BAF is derived which is lower than that used to derive human health criteria or values under rule 3745-1-42 of the Administrative Code.

(F) Notification requirements. When the director proposes a site-specific modification to a criterion or value as allowed or required in paragraph (A) of this rule, the director shall notify the other Great Lakes states of such a proposal and, for less stringent criteria, supply appropriate justification.

(G) Notwithstanding paragraphs (A) to (F) of this rule, any chemical-specific criterion listed in this chapter or derived pursuant to rule 3745-1-40, 3745-1-41, 3745-1-42 or 3745-1-43 of the Administrative Code may be modified for a particular surface water body or segment if specific information is provided to the director which shows either of the following:

(1) That all, or portions, of the data used to derive the criterion are inapplicable or not relevant to that surface water body or segment.



(2) That the otherwise applicable criterion is more or less stringent than necessary to protect human health, aquatic life, wildlife or agricultural use.

In such cases, the director may adopt a less or more stringent site-specific criterion if it can be scientifically justified based on new toxicological data or site-specific conditions of water quality, pollutant bioavailability, resident species, or human exposure.

(H) Within the lake Erie drainage basin, paragraph (G) of this rule applies only when it results in modifications at least as protective as modifications resulting from paragraphs (A) to (F) of this rule.