

**Draft Nutrient Criteria for Lakes from
2010 Draft Water Quality Standards rules in OAC Chapter 3745-1**

Draft 3745-1-07 Beneficial Use Designations

Lake habitat.

- a. These are natural or constructed pooled or impounded bodies of water, excluding lake Erie, that meet the definition of lake in rule 3745-1-02 of the Administrative Code.
- b. All inland water bodies meeting the definition of lake in rule 3745-1-02 of the Administrative Code are designated lake habitat. Water quality standards applicable to lake Erie are described in rule 3745-1-31 of the Administrative Code.

Draft 3745-1-43 Water Quality Criteria for the Tiered Aquatic Life Use Designations

Lake habitat.

- a. The water quality criteria in table 43-12 of this rule apply in lieu of or in addition to the water quality criteria for the protection of the base aquatic life use in rule 3745-1-42 of the Administrative Code.
- b. For the purposes of the water quality criteria in table 43-12 of this rule, the following four lake types are recognized.
 - i. Dugout lake is a lake formed by the accumulation of rainfall or ground water in a hole excavated in an upland area including, but not limited to, borrow pits, ponds, and quarries.
 - ii. Impoundment is a lake formed by an impoundment structure, such as a dam, within a flowing body of water such that the normal water flow is interrupted, resulting in a residence time index of 0.5 or greater.
 - iii. Natural lake is a lake formed without human intervention, including, but not limited to, kettle lakes formed from glacial outwash.
 - iv. Upground reservoir is a lake constructed of earthen dikes separate from the water source primarily used to store drinking water. Surface water or ground water is pumped into the lake to fill the basin.

Table 43-12. Lake habitat criteria. All criteria apply outside the mixing zone.

Parameter Lake type	Form ¹	Units ²	Statewide criteria	Ecoregional criteria				
				ECBP	EOLP	HELP	IP	WAP
Ammonia	T	mg/l	Table 43-4	--	--	--	--	--
Chlorophyll a ³								
Dugout lakes	T	ug/l	6.0	--	--	--	--	--
Impoundments	T	ug/l	--	14.0	14.0	14.0	14.0	6.2
Natural lakes	T	ug/l	14.0	--	--	--	--	--
Upground reservoirs	T	ug/l	6.0	--	--	--	--	--
Dissolved oxygen ⁴								
All lake types	T	mg/l	5.0 OMZM 6.0 OMZA	--	--	--	--	--
Nitrogen ³								
Dugout lakes	T	ug/l	450	--	--	--	--	--
Impoundments	T	ug/l	--	930	740	930	688	350
Natural lakes	T	ug/l	638	--	--	--	--	--
Upground reservoirs	T	ug/l	1,225	--	--	--	--	--
pH								
All lake types	--	s.u.	a	--	--	--	--	--
Phosphorus								
Dugout lakes	T	ug/l	18	--	--	--	--	--
Impoundments	T	ug/l	--	34.0	34.0	34.0	34.0	14
Natural lakes	T	ug/l	34	--	--	--	--	--
Upground reservoirs	T	ug/l	18	--	--	--	--	--
Secchi disk transparency ⁵								
Dugout lakes	--	m	2.60	--	--	--	--	--
Impoundments	--	m	--	1.19	1.19	1.19	1.19	2.16
Natural lakes	--	m	1.19	--	--	--	--	--
Upground reservoirs	--	m	2.60	--	--	--	--	--
Temperature								
All lake types	--	--	b	--	--	--	--	--

¹ T = total.

² m= meters; mg/l = milligrams per liter (parts per million); ug/l = micrograms per liter (parts per billion); s.u. = standard units

³ These criteria apply as medians from May through October in the epilimnion of stratified lakes and throughout the water column in unstratified lakes.

⁴ For dissolved oxygen, OMZM means outside mixing zone minimum and OMZA means outside mixing zone minimum twenty-four-hour average. The dissolved oxygen criteria apply in the epilimnion of stratified lakes and throughout the water column in unstratified lakes.

⁵ These criteria apply as minimum values from May through October.

^a pH is to be 6.5-9.0, with no change within that range attributable to human-induced conditions.

^b At no time shall the water temperature exceed the average or maximum temperature that would occur if there were no temperature change attributable to human activities.