

## For Interested Party Review – August 2008 Draft

### 3745-1-41      Water quality criteria for recreation use designations.

[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.]

[Comment: For definitions of the use designations, see rule 3745-1-07 of the Administrative Code. For all other definitions, see rule 3745-1-02 of the Administrative Code.]

(A) General water based recreation use. The criteria associated with the general water based recreation use designation apply as "outside mixing zone" or "inside mixing zone maximum." For the purpose of setting water quality based effluent limits, the criteria that apply "outside mixing zone" shall be met after the effluent and the receiving water are reasonably well mixed as provided in rules 3745-2-05 and 3745-2-08 of the Administrative Code. The criteria listed as "inside mixing zone maximum" shall be applicable as end of pipe maximum effluent limits or as criteria to be met within a short distance of the effluent pipe except as provided in rule 3745-2-08 of the Administrative Code.

(1) To support the conditions under paragraphs (B), (C) and (E) of rule 3745-1-04 of the Administrative Code, the criteria in table 41-1 of this rule shall apply as maximum values not to be exceeded.

Table 41-1. Water quality criteria for the protection of the general water based recreation use - visual aesthetic qualities.

<u>Chemical</u>	<u>Form</u> <sup>1</sup>	<u>Units</u> <sup>2</sup>	<u>Criteria (IMZM)</u> <sup>3</sup>	<u>Criteria (OMZM)</u> <sup>3</sup>
<u>MBAS (foaming agents)</u>	<u>T</u>	<u>mg/l</u>	<u>--</u>	<u>0.50</u>
<u>Oil &amp; grease</u>	<u>T</u>	<u>mg/l</u>	<u>--</u>	<u>10</u> <sup>a</sup>
<u>Phosphorus</u>	<u>T</u>	<u>mg/l</u>	<u>b</u>	<u>b</u>

<sup>1</sup> T = total.

<sup>2</sup> mg/l = milligrams per liter (parts per million).

<sup>3</sup> IMZM = inside mixing zone maximum; OMZM = outside mixing zone maximum.

<sup>a</sup> Surface waters shall be free from floating oils and shall at no time produce a visible sheen or color film. Levels of oils or petrochemicals in the sediment or on the banks of a watercourse which cause deleterious effects to the biota will not be permitted.

<sup>b</sup> Total phosphorus as P shall be limited to the extent necessary to prevent nuisance growths of algae, weeds, and slimes that result in a violation of the water quality criteria set forth in paragraph (E) of rule 3745-1-04 of the Administrative Code. In areas where such nuisance growths exist, phosphorus discharges from point sources determined significant by the director shall not exceed a daily average of one milligram per liter as total P, or such stricter requirements as may be imposed by the director.

- (2) To reduce potential human health risks associated with the coincidental consumption of chemical contaminants present in sport caught fish, the criteria in table 41-2 of this rule shall apply as average values outside mixing zones. Additional criteria are calculated pursuant to rule 3745-1-38 of the Administrative Code and are available on the Ohio EPA website <http://www.epa.state.oh.us/dsw/wqs/criteria.html>.

Table 41-2. Water quality criteria for the protection of the general water based recreation use - consumption of sport caught fish. In general, the criteria in this table were developed using U.S. EPA national guidance. However, if criteria developed using the procedures in 40 C.F.R. 132, "Water Quality Guidance for the Great Lakes System" were more stringent, those more stringent criteria are listed for the Lake Erie basin. Additional criteria are calculated pursuant to rule 3745-1-38 of the Administrative Code and are available on the Ohio EPA website <http://www.epa.state.oh.us/dsw/wqs/criteria.html>.

Chemical	Form <sup>1</sup>	Units <sup>2</sup>	Criteria (OMZA) <sup>3</sup>	
			ORB	LEB
<u>Benzene</u> <sup>4</sup>	<u>T</u>	<u>µg/l</u>	<u>200</u>	<u>160</u>
<u>Chlordane</u> <sup>4</sup>	<u>T</u>	<u>µg/l</u>	<u>0.00089</u>	<u>0.00025</u>
<u>Chlorobenzene</u>	<u>T</u>	<u>µg/l</u>	<u>850</u>	
<u>Cyanides</u>	<u>T</u>	<u>µg/l</u>	<u>17,000</u>	
<u>DDT</u> <sup>4</sup>	<u>T</u>	<u>µg/l</u>	<u>0.00019</u>	<u>0.00015</u>
<u>Dieldrin</u> <sup>4</sup>	<u>T</u>	<u>µg/l</u>	<u>0.000011</u>	<u>0.0000065</u>
<u>2,4-Dimethylphenol</u>	<u>T</u>	<u>µg/l</u>	<u>2,400</u>	
<u>2,4-Dinitrophenol</u>	<u>T</u>	<u>µg/l</u>	<u>800</u>	
<u>Hexachlorobenzene</u> <sup>4</sup>	<u>T</u>	<u>µg/l</u>	<u>0.00048</u>	<u>0.00045</u>
<u>Hexachloroethane</u>	<u>T</u>	<u>µg/l</u>	<u>1.9</u>	
<u>Lindane</u>	<u>T</u>	<u>µg/l</u>	<u>0.11</u>	
<u>Mercury</u>	<u>TR</u>	<u>µg/l</u>	<u>0.012</u>	<u>0.0031</u>
<u>Methylene chloride</u> <sup>4</sup>	<u>T</u>	<u>µg/l</u>	<u>4,000</u>	<u>2,600</u>
<u>Polychlorinated biphenyls (PCBs)</u> <sup>5</sup>	<u>T</u>	<u>µg/l</u>	<u>0.000017</u>	<u>0.000015</u>
<u>2,3,7,8-TCDD (Dioxin)</u> <sup>4</sup>	<u>T</u>	<u>µg/l</u>	<u>6.8E-10<sup>a</sup></u>	<u>6.5E-10<sup>a</sup></u>
<u>Toluene</u>	<u>T</u>	<u>µg/l</u>	<u>4,900</u>	
<u>Toxaphene</u> <sup>4</sup>	<u>T</u>	<u>µg/l</u>	<u>0.000066</u>	
<u>Trichloroethylene</u> <sup>5</sup>	<u>T</u>	<u>µg/l</u>	<u>570</u>	<u>370</u>

<sup>1</sup> T = total; TR = total recoverable.

<sup>2</sup> µg/l = micrograms per liter (parts per billion).

<sup>3</sup> OMZA = outside mixing zone average; ORB = Ohio river drainage basin; LEB = Lake Erie drainage basin.

<sup>4</sup> Criteria for this chemical are based on a carcinogenic endpoint.

<sup>5</sup> The LEB criterion for this chemical is based on a carcinogenic endpoint.

<sup>a</sup> This criterion applies to all 2,3,7,8-TCDD equivalents as specified in rule 3745-2-07 of the Administrative Code.

(B) Recreation use subcategories.

- (1) To reduce potential human health risks associated with exposure to pathogens in surface waters of the state, the E. coli criteria in table 41-3 of this rule shall apply inside and outside the mixing zone.
- (2) Compliance with the E. coli criteria shall be based on the seasonal geometric mean if more than one measurement is available and on the single sample maximum if only one measurement is available. The single sample maximum criteria shall also be used for the issuance of beach advisories and may be used in other circumstances if the director determines that, based on the magnitude, duration or frequency of exceedences, it is necessary to protect the designated use.

Table 41-3. Statewide numerical criteria for the protection of recreation use subcategories.

<u>Subcategory</u>	<u>E. coli (colony counts per 100 ml)</u>	
	<u>Seasonal geometric mean</u>	<u>Single sample maximum</u>
<u>Bathing water</u>	<u>126</u>	<u>235</u>
<u>Class A primary contact recreation</u>	<u>126</u>	<u>298</u>
<u>Class B primary contact recreation</u>	<u>161</u>	<u>523</u>
<u>Class C primary contact recreation</u>	<u>206</u>	<u>940</u>
<u>Secondary contact recreation</u>	<u>1030</u>	<u>1030</u>

Replaces Part of 3745-1-07

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