Presented below are water quality standards that are in effect for Clean Water Act purposes.

EPA is posting these standards as a convenience to users and has made a reasonable effort to assure their accuracy. Additionally, EPA has made a reasonable effort to identify parts of the standards that are not approved, disapproved, or are otherwise not in effect for Clean Water Act purposes.

3745-2-02 Definitions.

(A) Acronyms and abbreviations used in Chapter 3745-2 of the Administrative Code are defined as listed below.

AIM	area of initial mixing
BAF	bioaccumulation factor
BCC	bioaccumulative chemical of concern
BCF	bioconcentration factor
BSAF	bioto-sediment accumulation factor
C.F.R.	code of federal regulations
D.O.	dissolved oxygen
DMT	dissolved metal translator
FAV	final acute value
HMQ	harmonic mean flow
IC	inhibition concentration
IMZM	inside mixing zone maximum
LAMP	lakewide management plan
LOEC	lowest observed effect concentration
LA	load allocation
LC	lethal concentration
NOEC	no observed effect concentration
NPDES	national pollutant discharge elimination system
OMZM	outside mixing zone maximum
PQL	practical quantification level
PEL	preliminary effluent limit
PEQ	projected effluent quality
POTW	publicly owned treatment works
Q	flow, as in 7Q10
RAP	remedial action plan

SDR	stream-to-discharge ratio
TCDD	tetrachloro-dibenzo dioxin
TMDL	total maximum daily load
TU_a	acute toxic unit
TU_c	chronic toxic unit
U.S.C.	United States Code
U.S.EPA	United States environmental protection agency
WLA	wasteload allocation
WQBEL	water quality based effluent limit
WET	whole effluent toxicity

(B) Technical words used in Chapter 3745-2 of the Administrative Code shall be defined as listed below.

(1) “1Q10", see stream design flow.

(2) “30Q10", see stream design flow.

(3) “7Q10", see stream design flow.

(4) “90Q10", see stream design flow.

(5) “Act” means the federal Water Pollution Control Act, 33 U.S.C. 1251 et seq. (as amended).

(6) “Acute mixing zone” means the mixture of receiving water and effluent adjacent to a treated or untreated discharge within which the acute aquatic life criteria may be exceeded but the inside mixing zone maximum criteria may not be exceeded. The acute aquatic life criteria shall be met on the downstream perimeter of the acute mixing zone.

(7) “Ambient water temperature” means the spatial (longitudinal, lateral and vertical) and temporal water temperature measured in the receiving body of water prior to a specific waste heat discharge, and is outside the influence of any thermal mixing zone.

(8) “Ambient screening values“ mean numbers which estimate the concentration of a pollutant in a receiving water required to protect humans from non-carcinogenic health effects and aquatic life from acute and chronic effects. These numbers are used to determine the necessity of developing a tier II value for a pollutant.

(9) "Analytical detection limit" means the detection limit applied during the laboratory analyses for a specific measurement or set of measurements.

(10) "Area of initial mixing" or "AIM" means the limited zone where discharge-induced mixing causes the effluent to rapidly mix with the receiving water such that the area may not be physically inhabitable to aquatic life. The inside mixing zone maximum criteria may be exceeded within the AIM but shall be met on the perimeter of the AIM.

(11) "Average criteria" means all numeric criteria and tier II values expressed on an average basis contained in Chapter 3745-1 of the Administrative Code.

(12) "Background" means all pollutants that flow from waters into the water body segment for which a TMDL, or a PEL determined in the absence of a TMDL, is being developed unless a load allocation is established for that source.

(13) "Bioaccumulation" means the net accumulation of a substance by an organism as a result of uptake from all environmental sources.

(14) "Bioaccumulative chemical of concern" or "BCC" has the same meaning as in rule 3745-1-02 of the Administrative Code.

(15) "Carcinogen" means a substance, for the purpose of calculating additivity, for which a cancer criterion exists as identified in or calculated pursuant to, Chapter 3745-1 of the Administrative Code.

(16) "Chronic mixing zone" means the mixture of receiving water and effluent adjacent to a treated or untreated discharge within which the chronic aquatic life, human health, wildlife and agricultural water supply criteria may be exceeded. The chronic aquatic life, human health, wildlife and agricultural water supply criteria shall be met on the downstream perimeter of the chronic mixing zone.

(17) "Conservative pollutant" means a persistent pollutant for which a TMDL, or a PEL determined in the absence of a TMDL, is being developed that is assumed to not decay or transform within the water body segment.

(18) "Criteria" means numeric criteria and tier II values established pursuant to Chapter 3745-1 of the Administrative Code.

(19) "Critical low depth for lakes" means the minimum depth reasonably expected for the lake at the discharge point based on historical records, release schedules, or other pertinent information.

(20) "Daily average temperature" means the arithmetic mean of multiple temperature measurements to be taken at least once per hour during a twenty-four hour day.

(21) “Design conditions” means the receiving water and effluent conditions applied in the determination of a TMDL, or a WLA in the absence of a TMDL, which represent the conditions most critical to protection of the applicable use designations. These conditions include, but are not limited to, stream design flow, effluent design flow, temperature, hardness, and pH.

(22) “Dilution ratio” means the ratio of receiving water to effluent for a given volume of water.

(23) “Director” means the director of Ohio environmental protection agency.

(24) “Discharge port” means the final outlet for effluent in a discharge pipe. This terminology is usually associated with outfall structures with multiple outlets designed to mix effluent rapidly with the receiving water.

(25) “Discharge induced mixing” means the state of mixing between the receiving water and effluent where the processes causing the mixing are induced primarily by the momentum of the effluent as it enters the receiving water.

(26) “Discharge” means the addition of any pollutant to a receiving water from a point source.

(27) “Dissolved metal translator” or “DMT” means the ratio between the total recoverable and dissolved concentrations of a metal in a receiving water, discharge, or a mixture of both which is expected to occur under the design conditions applicable to that metal.

(28) “Endangered or threatened species”, see threatened or endangered species.

(29) “Flowing receiving water” means a body of water that exhibits a primarily unidirectional flow at the point of discharge.

(30) “Group X”, see reasonable potential.

(31) “HMQ”, see stream design flow.

(32) “IC25“ means the inhibition concentration twenty-five; the toxicant concentration that would cause a twenty-five per cent reduction in a non-quantal biological measurement such as reproduction or growth in the test population (as opposed to lethality which is a quantal or “all-or-none” response).

(33) “Inside mixing zone maximum criteria” means the criteria that cannot be exceeded within the mixing zone. It is identical to final acute value (FAV), as defined in Chapter 3745-1 of the Administrative Code.

(34) “Lake Erie drainage basin“ means all the streams, rivers, lakes, and other bodies of water

within the drainage basin of lake Erie and within the United States.

(35) “Lake Erie Lakewide Management Plan” or “Lake Erie LAMP” means the management plan to restore and protect the beneficial uses of lake Erie developed in accordance with the Great Lakes Water Quality Agreement as amended in 1987, and the Great Lakes Critical Programs Act of 1990, Pub. L. No. 101-596, 104 Stat. 3000 (Nov. 16, 1990). The geographic scope of the lake Erie LAMP includes the open lake waters, the near shore area, embayments, river mouths and the lake effect zone of lake Erie tributaries.

(36) “LC50“, for whole effluent toxicity tests, means the median lethal concentration; the per cent by volume effluent concentration that kills fifty per cent of exposed organisms during a specified exposure period.

(37) “Lowest observed effect concentration” or ”LOEC“ means the lowest measured concentration (expressed as a per cent by volume) of an effluent or a toxicant that causes a statistically significant effect on a test organism during a specified exposure period.

(38) “Load allocation” or “LA” is the portion of a receiving water's loading capacity that is attributed to one of its existing or future nonpoint sources.

(39) “Loading capacity” is the greatest loading of a pollutant that a water body can receive without violating water quality standards under specific flow conditions; also referred to as assimilative capacity.

(40) “Maximum criteria” means all numeric criteria and tier II values expressed as maximum pursuant to Chapter 3745-1 of the Administrative Code.

(41) “Mixing zone” means an area of a water body contiguous to a discharge. This discharge is in transit and progressively diluted from the source concentration to the receiving system concentration. The mixing zone shall be considered a place where wastewater and receiving water mix and not as a place where wastes are treated.

(42) “Natural conditions” mean those conditions that are measured outside the influence of human activities.

(43) “New discharge”, for the purposes of implementing the bioaccumulative chemical of concern provisions in this chapter, means:

(a) A discharge of pollutants to a water body from a building, structure, facility or installation, the construction of which commences after the effective date of this rule;

(b) A new discharge from an existing discharger that commences after the effective date of this rule; or

(c) An expanded discharge from an existing discharger that commences after the effective date of this rule, except for those expanded discharges resulting from changes in loadings of any BCC within the existing capacity and processes (e.g., normal operational variability, changes in intake water pollutants, increasing the production hours of the facility or adding additional shifts, or increasing the rate of production), and that are covered by the existing Ohio NPDES permit.

Not included within the definition of "new discharge" are new or expanded discharges of BCCs from a publicly owned treatment works when such discharges are necessary to prevent a public health threat to the community (e.g., a situation where a community with failing septic systems is connected to a POTW to avert a potential public health threat from these failing systems). These and all other discharges of BCCs are defined as existing discharges.

(44) "No observed effect concentration" or "NOEC" means the highest tested concentration (expressed as a per cent by volume) of an effluent or a toxicant that causes no statistically significant observed effects on a test organism during a specified exposure period.

(45) "Non-flowing waters" means water bodies which do not exhibit a natural unidirectional flow at the point of discharge.

(46) "Nonpoint source" means any source of pollutants other than those defined as point sources. Nonpoint sources include, but are not limited to, in-place contaminants, direct wet and dry deposition, ground water inflow, and overland runoff.

(47) "Ohio river drainage basin" means all the streams, rivers, lakes, and other bodies of water within the drainage basin of the Ohio river.

(48) "Point source" means any discernible, confined or discrete conveyance from which a pollutant is or may be discharged to the surface waters of the state.

(49) "Pollutant" means sewage, industrial waste, or other waste as defined by divisions (B) to (D) of section 6111.01 of the Revised Code.

(50) "Pollution prevention alternatives assessment" means an analysis that identifies any cost-effective pollution prevention alternatives and techniques that are available to the discharger, that would reduce the extent to which the increased loading results in a lowering of water quality. A pollution prevention alternatives analysis shall demonstrate a good faith effort by the discharger to review equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials and improvements to housekeeping. The discharger is not required to implement a pollution prevention alternative if it is not technically or economically

feasible.

(51) “Practical quantification level” or “PQL” means a concentration of a pollutant that is five times the method detection limit for the most sensitive available analytical procedure currently approved under 40 C.F.R. 136 for a pollutant, unless the director, by rules adopted in accordance with Chapter 119. of the Revised Code, establishes a different practical quantification level for the pollutant that is consistent with and no more stringent than the appropriate national consensus standard or other generally accepted standard.

(52) “Preliminary effluent limit” or “PEL” means the most stringent applicable WLA expressed as both an average and a maximum. The average PEL is the lowest WLA to maintain chronic criteria and the maximum PEL is the lowest WLA to maintain acute criteria.

(53) “Projected effluent quality“ or “PEQ” means the estimated level of a pollutant in an effluent.

(54) “Publicly owned treatment works” or “POTW” means any device or system used in the treatment (including recycling and reclamation) of domestic sewage or industrial waste of a liquid nature that is owned by a municipality, county, or state entity or any public body created under state law that has authority over disposal of sewage.

(55) “Ranked ninety-fifth percentile” means the data value in a set of data which is greater than ninety-five per cent of the other data values as determined by ranking the data values from lowest to highest.

(56) “Reasonable potential” means the likelihood of a pollutant to cause or contribute to an excursion of a water quality standard. For chemical-specific determinations, a grouping system for assessing whether to establish WQBELs as limits in NPDES permits consists of five categories that rank the reasonable potential.

(a) “Group one" pollutants have no applicable criteria and the director has determined that data is insufficient to calculate criteria or values. The reasonable potential for pollutants in this group cannot be determined.

(b) “Group two" pollutants have little potential based on water quality data to cause or contribute to a water quality excursion; permit requirements may not be warranted based solely on water quality considerations.

(c) “Group three“ pollutants have some potential based on water quality data to cause or contribute to a water quality excursion; permit requirements may not be warranted based solely on water quality considerations.

(d) “Group four" pollutants have significant potential based on water quality data to cause or contribute to a water quality excursion; permit monitoring requirements are generally warranted based solely on water quality considerations.

(e) “Group five" pollutants have the highest potential based on water quality data to cause or contribute to a water quality excursion; permit limitations are generally warranted based solely on water quality considerations.

(57) “Receiving water” means the water body into which point and nonpoint sources flow.

(58) “Remedial action plan” or “RAP” means a management plan to restore and protect beneficial uses in the Great Lakes areas of concern. The areas of concern were identified by state and federal government agencies with the international joint commission as the most polluted sites around the Great Lakes. A RAP is prepared in accordance with the Great Lakes Water Quality Agreement as amended in 1987, and the Great Lakes Critical Programs Act of 1990, Public Law Number 101-596, 104 Stat. 3000 (Nov. 16, 1990). A RAP is prepared from a broad ecosystem perspective and with considerable public involvement.

(59) “Representative aquatic species” mean those organisms, either natural or introduced, which presently exist or have existed in the surface waters of the state prior to July 1, 1977, with the exception of those banned species outlined in rule 1501:31-19-01 of the Administrative Code. In addition, it may include any species that are introduced into the surface waters of the state. Aquatic species designated as representative shall satisfy one or more of the following:

(a) Species which are particularly vulnerable to the existing or proposed environmental impact in question;

(b) Species which are commercially or recreationally valuable;

(c) Species which are threatened, rare, or endangered;

(d) Species which are critical to the structure and function of the aquatic community;

(e) Species whose presence is causally related to the existing or proposed environmental impact under examination;

(f) Species that are potentially capable of becoming localized nuisance species; or

(g) Species that are representative of the ecological, behavioral, and physiological requirements and characteristics of species determined in paragraphs (B)(58)(a) to (B)(58)(f) of this rule, but which themselves may not be representative.

(60) “Stream design flow” means the flow in a receiving water upstream from a discharge or nonpoint source that represents the flow conditions that are critical for protection of an aquatic life, human health, wildlife, or agricultural water supply use. Stream design flows may be calculated using annual or seasonal data; where seasonal data is appropriate, the applicable months are specified. The following statistical quantities based on stream flow data are used as stream design flows for various use designations in accordance with the rules of Chapter 3745-2 of the Administrative Code.

(a) “1Q10" or “one-day, ten-year low flow” means the lowest one-day average flow expected to occur once every ten years.

(b) “7Q10" or “seven-day, ten-year low flow” means the lowest seven-consecutive-day average flow expected to occur once every ten years.

(c) “30Q10" or “thirty-day, ten-year low flow” means the lowest thirty-consecutive-day average flow expected to occur once every ten years.

(d) “90Q10" or “ninety-day, ten-year low flow” means the lowest ninety-consecutive-day average flow expected to occur once every ten years.

(e) “HMQ” or “harmonic mean flow” is calculated as the reciprocal of the arithmetic mean of the reciprocals of the individual daily flows. The HMQ is determined from a continuous record of daily average flow measurements.

(61) “Thermal mixing zone” means that portion of a water body into which waste heat is discharged and assimilated, and within which the average and maximum daily average temperatures do not apply, except as prescribed by Chapter 3745-2 of the Administrative Code.

(62) “Threatened or endangered species” mean those species of the state's biota which are threatened with statewide extirpation or national extinction, as listed in rule 1501:31-23-01 of the Administrative Code or 50 C.F.R. 17 or that are listed as endangered or threatened under section 4 of the Endangered Species Act, 16 U.S.C. 1531 et seq. (As amended).

(63) “Total maximum daily load” or “TMDL” means the sum of the existing and/or projected point source, nonpoint source, and background loads for a pollutant to a specified watershed, water body, or water body segment. A TMDL sets and allocates the maximum amount of a pollutant that may be introduced into the water and still ensures attainment and maintenance of water quality standards.

(64) “Waste heat discharge” means a point source discharge through which excess heat is discharged into the surface waters of the state.

(65) “Wasteload allocation” or “WLA” means the portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. In the absence of a TMDL or TMDL-ARP, a WLA is the allocation for an individual point source that ensures that the level of water quality to be achieved by the point source is derived from and complies with all applicable water quality standards.

(66) “Water bodies” or “waters of the state” mean all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, which are situated wholly or partly within, or border upon, this state, or are within its jurisdiction, except those private waters which do not combine or effect a junction with natural surface or underground waters.

(67) “Water quality based effluent limit” or “WQBEL” means an effluent limitation determined on the basis of water quality standards contained in Chapter 3745-1 of the Administrative Code or wasteload allocation procedures contained in Chapter 3745-2 of the Administrative Code.

(68) “Water quality standards” means the standards set forth in Chapter 3745-1 of the Administrative Code.

(69) “Wet weather point source” means any discernible, confined and discrete conveyance from which pollutants are, or may be, discharged as the result of a wet weather event. Discharges from wet weather point sources include only: discharges of storm water from a municipal separate storm sewer as defined in 40 C.F.R. 122.26(b)(8); storm water discharges associated with industrial activity as defined in 40 C.F.R. 122.26(b)(14); discharges of storm water and sanitary wastewaters (domestic, commercial, and industrial) from a combined sewer overflow; or any other storm water discharge for which a permit is required under section 402(p) of the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq. (As amended). All storm water discharges associated with industrial activity that are mixed with process wastewater shall not be considered a wet weather point source.

(70) “Whole effluent toxicity” or “WET” means the total toxic effect of an effluent measured directly with a toxicity test.

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