

**TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY  
CHAPTER 740. IMPLEMENTATION OF OKLAHOMA'S WATER QUALITY  
STANDARDS**

**SUBCHAPTER 1. GENERAL PROVISIONS**

**252:740-1-2. Definitions**

In addition to definitions of terms found in OAC 252:730-1-2, which are incorporated herein by reference, the following words, terms and notations, when used in this Chapter, shall have the following meanings unless the context clearly indicates otherwise:

"**7T2**" means the seven-day maximum temperature likely to occur with a 50% probability each year. The 7T2 is calculated using a moving average of seven consecutive days for each year in a given record. These seven-day receiving stream temperature values are ranked in descending order. An order number, m, is calculated based on the number of years of record, n, with a recurrence interval of 2 years, as  $m = (n+1)/2$ . The m<sup>th</sup> highest average temperature is the 7T2.

"**A**" means mean annual average flow.

"**ACR**" means acute to chronic ratio.

"**Acute to chronic ratio**" means LC50/NOEC. The NOEC is the highest concentration at which no effect on test organisms is observed over a relatively long period. Quarterly biomonitoring over the life of the permit is sufficient to determine the ACR if the NOEC and LC50 may be determined. If the ACR is unknown, a default value of 10 may be used for implementation purposes.

"**Background**" means the ambient condition upstream or upgradient from a facility, practice or activity which has not been affected by that facility, practice or activity.

"**Beneficial use limitation**" means a more stringent restriction than that required to protect the beneficial use. A prohibition on new point sources is an example of a beneficial use limitation.

"**Board**" means the Environmental Quality Board.

"**BOD**" means biochemical oxygen demand.

"**C**" means maximum concentration on the mixing zone boundary.

"**C<sub>95</sub>**" means the 95th percentile maximum likelihood concentration.

"**C<sub>b</sub>C<sub>B</sub>**" means background concentration.

"**C<sub>e</sub>**" means effluent concentration.

"**cfs**" means cubic feet per second.

"**C<sub>mean</sub>**" means the geometric mean of all effluent concentrations analyzed for the toxicant.

"**C<sub>t</sub>**" means the appropriate criterion listed in OAC 252:730.

"**CBOD**" means carbonaceous biochemical oxygen demand.

"**Coefficient of variation**" means standard deviation divided by the mean.

"**Continuing Planning Process**" (or "CPP") means the most recent edition of the document produced annually by the Oklahoma Department of Environmental Quality which describes water quality programs implemented within the State.

"**Continuing toxicity**" means a tendency to be toxic.

"**Control**" means test organisms exposed to 0% effluent as part of the whole effluent toxicity testing procedure.

"**Cooling water reservoir**" means a privately owned reservoir used in the process of cooling water for industrial purposes.

~~"**CPP**" means the Continuing Planning Process document.~~

"**CV**" means coefficient of variation.

"D" means diameter of the discharge pipe in feet.

~~"df" means dilution factor.~~

"Dilution capacity" means a measure of the ability of the receiving stream to dilute effluent, defined as the ratio of the regulatory effluent flow to the regulatory receiving stream flow.

"Dilution factor" (or "df") means a measure of the minimum dilution that occurs on the mixing zone boundary.

"DO" means dissolved oxygen.

"Drainage area" means the area above the discharge drained by the receiving stream.

"Event mean concentration" means the flow-weighted average for a given storm event. The flow-weighted average is represented as the sum of the loads calculated for a series of storm samples divided by the sum of the discharges calculated for each of the storm samples.

"EPA" means the United States Environmental Protection Agency.

"HQW" means high quality waters as defined in OAC 252:730-3-2(b).

"Implementation Plan" means a Water Quality Standards Implementation Plan developed and promulgated by a state environmental agency as required by 27A O.S. § 1-1-202.

"Increased load" means the mass of pollutant discharged which is greater than the permitted mass loadings and concentrations, as appropriate, in the discharge permit effective when the SWS, SWS-R, HQW, or ORW beneficial use limitation was assigned.

"Lake mixing zone" means a volume extending one hundred feet from the source for implementation purposes, unless otherwise specified in OAC 252:730.

"LC50" means the lethal concentration as defined in OAC 252:730-1-2.

"LMFO" means licensed managed feeding operation as defined in 2 O.S. § 9-202.

"Mean annual average flow" means the annual mean flow found in "Statistical Summaries", USGS publication no. 87-4205, or most recent version thereof, or other annual mean flow as approved by the Oklahoma Water Resources Board or the permitting authority.

"Monthly average level" means the concentration of a toxicant in the permit which may not be exceeded by the observed effluent concentration averaged over a calendar month.

"Naturally occurring condition" means any condition affecting water quality which is not caused by human influence, including, but not limited to, soils, geology, hydrology, climate, wildlife, and water flow with specific consideration given to seasonal and other natural variations.

"NLW" means nutrient-limited watershed as defined in OAC 252:730-1-2.

"NOEC" means no observed effect concentration.

"NPDES" means National Pollutant Discharge Elimination System.

"Normal pool elevation" means the elevations listed in the "Oklahoma Water Atlas", Oklahoma Water Resources Board publication no. 135, or most recent version thereof.

"ORW" means Outstanding Resource Waters as defined in OAC 252:730-3-2(a).

"Outfall" means a point source which contains all the effluent being discharged to the receiving water.

~~"OWQS" means Oklahoma Water Quality Standards.~~

"Permitting authority" means state environmental agency as defined or provided in Title 27A of the Oklahoma Statutes having jurisdiction as provided by law.

"Persistent toxicity" means toxicity due to effluent constituents which are not subject to decay, degradation, transformation, volatilization, hydrolysis, or photolysis.

"Q\*" means dilution capacity.

"Q<sub>e</sub>" means the regulatory effluent flow.

"Q<sub>el</sub>" means long-term average effluent flow.

"Q<sub>es</sub>" means short-term average effluent flow.

"**Q<sub>u</sub>**" means the regulatory receiving stream flow.

"**Regulatory mixing zone**" means the volume of receiving water described in OAC 252:730-5-26.

"**Reasonable potential factor**" means the 95th percentile maximum likelihood estimator for a lognormal distribution.

"**SS**" means sample standard as defined in OAC 252:730-1-2.

"**Storm event**" means precipitation, after a minimum of 72 hours has elapsed since cessation of previous precipitation, in the watershed of a stream segment that produces a 30 percent rise in stream flow over the average flow of the preceding 72 hours resulting from surface run-off.

"**SWS**" means Sensitive Public and Private Water Supplies.

"**SWS-R**" means waterbodies classified as sensitive public and private water supplies that may be augmented with reclaimed municipal water for the purpose of indirect potable reuse.

"**T**" means maximum temperature difference at the edge of the mixing zone boundary.

"**T<sub>a</sub>**" means regulatory ambient temperature.

"**T<sub>c</sub>**" means the temperature criterion.

"**T<sub>f</sub>**" means the 95th percentile maximum observed effluent temperature.

"**TDS**" means total dissolved solids at 180C.

~~"**TMDL**" means total maximum daily load.~~

"**Total maximum daily load**" (or "**TMDL**") means the sum of individual wasteload allocations for point sources, safety reserves, and loads from nonpoint source and natural backgrounds.

"**Trophic State Index**" (or "**TSI**") means a numerical quantification of lake productivity. The Trophic State Index shall be determined by  $TSI = 9.81 \times \ln(\text{chlorophyll-a}) + 30.6$ .

~~"**TSI**" means Trophic State Index.~~

"**TSS**" means total suspended solids.

"**USGS**" means United States Geological Survey.

"**W**" means canal width in feet.

"**YMS**" means yearly mean standard as defined in OAC 252:730-1-2.

#### **252:740-1-4. Testing procedures**

All methods of sample collection, preservation, and analysis used in implementing OAC 252:730 shall be in accordance with "The Guidelines Establishing Test Procedures for the Analysis of Pollutants" as provided by 40 ~~C.F.R.~~ CFR Part 136, or other procedures approved by the Oklahoma Laboratory Accreditation Program of the Oklahoma Department of Environmental Quality or practices that are institutionally recognized and appropriate for the parameter of concern and documented in accordance with OAC 252:740-15-3(e) and (g).

### **SUBCHAPTER 5. IMPLEMENTATION OF NUMERICAL CRITERIA TO PROTECT FISH AND WILDLIFE FROM TOXICITY DUE TO CONSERVATIVE SUBSTANCES**

#### **252:740-5-3. Reasonable potential**

(a) **General.** The need for a permit limit will be determined, on a pollutant-by-pollutant basis, after determination of reasonable potential, which considers assimilation capacity of the receiving water and effluent variability.

(b) **Use of reasonable potential factor; relationship with wasteload allocation process.**

(1) The technical report produced by the Oklahoma Water Resources Board entitled "The Incorporation Of Ambient Concentration With That Due To Effluent For Wasteload

Allocation" shall be used to determine if there is a reasonable potential for a criterion exceedance outside the mixing zone.  $C_{95} = 2.13C_{\text{mean}}$  is used for effluent concentration in the reasonable potential calculation.  $C_{\text{mean}}$  is the geometric mean of all effluent concentrations analyzed for the toxicant. If the geometric mean cannot be determined, an arithmetic mean may be substituted. If a large dataset of effluent concentrations is available, the permitting authority may not need to estimate  $C_{95}$ ; the 95th percentile value can be calculated from the data.

(2) The wasteload allocation process is used to determine reasonable potential.  $C$  is the reasonable potential concentration on the chronic regulatory mixing zone boundary.  $C$  is calculated for chronic criteria in streams as:  $C = \epsilon_b \underline{C}_B + (1.94Q^*(C_{95} - \epsilon_b \underline{C}_B)) / (1 + Q^*)$  when  $Q^*$  is less than or equal to 0.1823, or  $C = \epsilon_b \underline{C}_B + (C_{95} - \epsilon_b \underline{C}_B) / (6.17 - 15.51Q^*)$  when  $Q^*$  is greater than 0.1823 and less than 0.3333, or  $C = C_{95}$  when  $Q^*$  is greater than or equal to 0.3333.  $Q^* = Q_e/Q_u$ .  $Q^*$  is the dilution capacity.  $C$  is calculated for lakes as: *pipe*:  $C = \epsilon_b C_B + (D(C_{95} - \epsilon_b C_B)) / 20.15$  when  $D$  is greater than or equal to 3 feet, or *canal*:  $C = \epsilon_b C_B + (W^{1/2}(C_{95} - \epsilon_b C_B)) / 4.2$  when  $W$  is greater than or equal to 3 feet.  $D$  is the diameter of the discharge pipe in feet and  $W$  is the width of the canal in feet.  $D$  and  $W$  shall not be less than three feet for implementation purposes. When  $C$  is the concentration on the acute regulatory mixing zone boundary it is calculated as  $C = \epsilon_b \underline{C}_B + (Q_e (C_{95} - \epsilon_b \underline{C}_B) / 100)$ . If  $Q_e$  is greater than 100 cfs, then 100 cfs shall be substituted for  $Q_e$ .

(3) For regulatory purposes, there is a reasonable potential for chronic toxicity if concentrations of ammonia outside the chronic regulatory mixing zone exceed 6 mg/L.

## **SUBCHAPTER 7. IMPLEMENTATION OF NUMERICAL CRITERIA TO PROTECT HUMAN HEALTH FROM TOXICITY DUE TO CONSERVATIVE SUBSTANCES**

### **252:740-7-3. Reasonable potential**

(a) **General.** Complete mixing of effluent and receiving water shall be used to determine appropriate permit limits. A mass balance model shall be used for implementation purposes.

(b) **Determination of reasonable potential factor.**

(1) The mass balance equation will be used in the determination of human health reasonable potential:  $C = (C_e Q^* + \epsilon_b \underline{C}_B) / (Q^* + 1)$ .  $Q^* = Q_e/Q_u$ , where  $Q_e$  is the regulatory effluent flow.  $C$  must be considered a long-term average concentration after complete mixing.  $\epsilon_b \underline{C}_B$  is the background concentration. To determine if there is a reasonable potential to exceed the criterion after complete mixing, choose  $C_e = 2.13C_{\text{mean}}$ , where  $C_{\text{mean}}$  is a geometric mean of all effluent concentrations analyzed for the toxicant. If the geometric mean cannot be determined, an arithmetic mean may be used instead.

(2) Representative background concentrations will be used if available. Such representative data should reflect long-term average pollutant concentrations for implementation purposes. Otherwise,  $\epsilon_b \underline{C}_B$  is assumed zero.

(3)  $C$  must be compared with the applicable water quality criterion to determine if there is a reasonable potential for the pollutant discharge to cause a criterion exceedance. If concentration after complete mixing is greater than the human health criterion, a permit limit will be required.

## **SUBCHAPTER 9. IMPLEMENTATION OF CRITERIA TO PROTECT THE AGRICULTURE BENEFICIAL USE**

#### **252:740-9-4. Reasonable potential**

(a) **General.** The need for a permit limit will be determined on a mineral constituent basis, after application of the reasonable potential equation specified in (b) of this Section, which considers assimilation capacity of the receiving water and effluent variability.

(b) **Reasonable potential equation.** OAC 252:730-5-13(d) requires that complete mixing of effluent and receiving water be taken into account in the reasonable potential equation. The use of mass balance to obtain wasteload allocations for complete mixing is codified at OAC 252:740-7-3(a). Therefore, the reasonable potential equation for mineral constituents is  $C = (Q_u BC + Q_e C_{95}) / (Q_u + Q_e)$ , where  $C_{95} = 2.13 C_{\text{mean}}$ , where  $C_{\text{mean}}$  is the geometric mean of all effluent concentrations analyzed for the mineral. If the geometric mean cannot be determined, an arithmetic mean may be used. If sufficient effluent concentration observations exist as determined by the permitting authority, then the permitting authority may compute the 95th percentile concentration and use it as  $C_{95}$ , in accordance with OAC 252:740-5-3(b)(1).

(c) **Reasonable potential to exceed yearly mean standard.**  $Q_u = A$  and  $Q_e = Q_{el}$  in OAC 252:740-9-4(b) to obtain a long-term average concentration in-stream after complete mixing. If  $C$  is greater than the higher of the YMS or ~~700 milligrams per liter~~mg/L for TDS or ~~200~~250 milligrams per litermg/L for chlorides and sulfates, there is a reasonable potential to exceed an Agriculture beneficial use criterion, and a permit limit is required.

(d) **Reasonable potential to exceed sample standard.**  $Q_u = 0.68A$  and  $Q_e = Q_{es}$  in OAC 252:740-9-4(b) to obtain a short-term average concentration in-stream after complete mixing. If  $C$  is greater than the higher of the SS or ~~700 milligrams per liter~~mg/L for TDS or ~~200~~250 milligrams per litermg/L for chlorides and sulfates, there is a reasonable potential to exceed an Agriculture beneficial use criterion, so a permit limit is required.

### **SUBCHAPTER 13. IMPLEMENTATION OF ANTIDegradATION POLICY**

#### **252:740-13-8. Antidegradation review in surface waters**

(a) **General.** The antidegradation review process below presents the framework to be used when making decisions regarding the intentional lowering of water quality, where water quality is better than the minimum necessary to protect beneficial uses. OWRB technical guidance TRWQ2017-01 provides additional information.

(b) **Determination of Assimilative Capacity in Tier 2, Tier 2.5, and Tier 3 Waters.**

(1) All water quality monitoring and technical analyses necessary to determine receiving waterbody assimilative capacity for all applicable numeric and narrative criteria and associated parameters protective of waterbody beneficial uses shall be conducted by the interested party.

(2) Prior to initiating any monitoring or technical analysis to support determination of waterbody assimilative capacity, the interested party shall submit a workplan for review and approval by DEQ staff.

(3) As part of an approved workplan, the interested party shall characterize existing water quality of the receiving waterbody for each applicable criteria and associated parameters and evaluate if there is available assimilative capacity. Characterization of existing water quality shall address, at a minimum:

(A) Measurement of load and or concentration for all applicable criteria and associated parameter(s) in the receiving water; and

(B) The measurement of both existing and proposed point and nonpoint source discharge concentrations and or loadings; and

(C) The critical low flow or critical lake level of the receiving waterbody, including

drought of record in waterbodies receiving IPR discharges; and

(D) The limnological, hydrologic, seasonal, spatial and temporal variability and critical conditions of the waterbody; and

(E) Volumetric determination of anoxic dissolved oxygen condition consistent with OAC 252:730 and OAC 252:740; and

(F) The bioaccumulative nature of a pollutant shall be considered when determining assimilative capacity; and

(G) The 303(d) ~~list~~List as contained in the most recently approved Integrated Water Quality Assessment Report shall be reviewed and any difference between the water quality assessment information and the characterization of existing water quality shall be reconciled.

(4) Assimilative capacity shall be determined by comparing existing water quality, as determined consistent with subsection (a)(3) above to the applicable narrative and numeric criteria. In Tier 2 waters, assimilative capacity shall be determined and used with a margin(s) of safety (OAC 252:740-13-8(d)(1)(D)), which takes into account any uncertainty between existing or proposed discharges and impacts on receiving water quality.

(5) When existing water quality does not meet the criterion or associated parameter necessary to support beneficial use(s) or is identified as impaired on Oklahoma's 303(d) ~~list~~List as contained in the most recently approved Integrated Water Quality Assessment Report, no assimilative capacity shall exist for the given criterion.

(c) **Use of Assimilative Capacity in Tier 1 Waters.** Available assimilative capacity may be used in Tier 1 waters such that, water quality is maintained to fully protect all designated and existing beneficial uses.

(d) **Use of Assimilative Capacity in Tier 2 Waters.**

(1) If it is determined that assimilative capacity is available, the consumption of assimilative capacity may be allowed in a manner consistent with the requirements in 40 ~~C.F.R.~~CFR 131.12(a)(2) and this subchapter. In allowing the use of assimilative capacity, the state shall assure that:

(A) Water quality shall be maintained to fully protect designated and existing beneficial uses.

(B) Assimilative capacity shall be reserved such that all applicable narrative criteria in OAC 252:730 are attained and beneficial uses are protected.

(C) Fifty percent (50%) of assimilative capacity shall be reserved for all applicable water quality criteria listed in OAC 252:730, Appendix G, Table 2.

(D) In order to preserve a margin of safety; in no case shall any activity be authorized without the application of margin(s) of safety specified below:

(i) A twenty percent (20%) margin of safety shall be applied to an applicable numeric criterion for chlorophyll-a, total phosphorus, and total nitrogen. If numeric criteria are not available, the narrative nutrient criterion (OAC 252:730-5-9(d)) shall be applied and a twenty percent (20%) margin of safety shall be applied to the parameters listed in the criterion.

(ii) No more than forty-five percent (45%) of the lake volume shall be less than the dissolved oxygen criterion magnitude in OAC 252:730-5-12(f)(1)(C)(ii).

(iii) If the existing value of a criterion is within the margin of safety, no assimilative capacity is available and existing water quality shall be maintained or improved.

(E) When existing water quality does not satisfy the applicable criterion and support beneficial use(s) or has been designated as impaired in Oklahoma's 303(d) ~~list~~List as

contained in the most recently approved Integrated Water Quality Assessment Report, the applicable criterion shall be met at the point of discharge. If a TMDL has been approved for the impairment, loading capacity for the parameter may be available if TMDL load allocations include the proposed load from the discharge.

(2) An analysis of alternatives shall evaluate a range of practicable alternatives that would prevent or lessen the water quality degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation.

(3) After an analysis of alternatives and an option that utilizes any or all of the assimilative capacity is selected, the discharger must demonstrate that the lowering of water quality is necessary to accommodate important economic or social development in the area in which the waters are located.

(e) **Use of Assimilative Capacity in Tier 2.5 or 3.0 Waters.** Consistent with OAC 252:730-3-2(a) - (c), 252:730-5-25(a), 252:730-5-25(b), and 252:730-5-25(c)(1) – (c)(6) all available assimilative capacity shall be reserved in waterbodies classified as Tier 2.5 or 3.0 waters.

(f) **Public Participation.** Agencies implementing subsection 8(d), shall conduct all activities with intergovernmental coordination and according to each agency's public participation procedures, including those specified in Oklahoma's continuing planning process.

## SUBCHAPTER 15. USE SUPPORT ASSESSMENT PROTOCOLS

### 252:740-15-3. Data requirements

(a) **General.** In order to determine whether a given beneficial use of a waterbody is supported, scientific data from the waterbody shall be used as prescribed in this Section. Data shall be collected and analyzed in a manner consistent with testing procedures provided in OAC 252:730-1-4 or practices that are institutionally recognized and appropriate for the parameter of concern and documented in accordance with OAC 252:740-15-3(g). All existing data available for a waterbody shall be used in the analysis, subject to the spatial, temporal and other requirements of this Section.

(b) **Spatial coverage.**

(1) **General for streams.** The spatial extent of assessment of use support in terms of stream miles shall be determined after taking into account existing data, spatial distribution of monitoring sites, sources of pollution and influence of tributaries. Major hydrological features, such as the confluence of a major tributary or a dam, may limit the spatial extent of an assessment based on one station.

(2) **Non-wadable streams.** Unless it is demonstrated to the contrary, a single monitoring site shall be considered representative of no more than 25 stream miles for non-wadable streams.

(3) **Wadable streams.** Unless it is demonstrated to the contrary, a single monitoring site shall be considered representative of no more than 10 stream miles for wadable streams.

(4) **Lakes.** The spatial extent of assessment of use support in terms of lake surface acres shall be estimated based on the spatial distribution of monitoring sites having the requisite number of samples, sources of pollution, influence of tributaries and best professional judgment. Arms or portions of lake may be treated separately from the main body of a lake. Unless it is demonstrated to the contrary, a single site shall be considered representative of an entire lake or an arm of no more than two hundred and fifty surface acres in size.

(5) **Spatial limitation for sampling sites.** For purposes of this Subchapter, observations, samples, and other data shall not be taken within any regulatory mixing zone.

(c) **Temporal coverage.**

(1) **General.** Observations, samples or other data collected for purposes of assessing use support shall be taken to avoid temporal bias, and seasonality shall be represented in the sampling scheme.

(2) **Streams.** Data no older than five years old shall be utilized in assessing use support for a stream unless:

(A) the data available from the preceding five-year period is insufficient to satisfy the requirements of OAC 252:740-15-3(d) or other more specific minimum requirements provided in this Subchapter, in which case data older than five years old may be utilized, or

(B) the provisions of OAC 252:740-15-4(b)(3) or OAC 252:740-15-4(c)(3) apply.

(3) **Lakes.** Data no older than ten years old shall be utilized in assessing use support for a lake unless

(A) the data available from the preceding ten-year period is insufficient to satisfy the requirements of OAC 252:740-15-3(d) or other more specific minimum requirements provided in this Subchapter, in which case data older than ten years old may be utilized, or

(B) the provisions of OAC 252:740-15-4(b)(3) or OAC 252:740-15-4(c)(3) apply.

(d) **Minimum number of samples.**

(1) Except when (f) of this Section applies, or unless otherwise noted in subchapter OAC 252:740-15 for a particular parameter, a minimum number of samples shall be required to assess beneficial use support.

(A) For streams and rivers, a minimum of 10 samples shall be required.

(B) For lakes greater than 250 surface acres, a minimum of 20 samples shall be required.

(C) For lakes 250 surface acres or smaller, a minimum of 10 samples shall be required.

(D) For toxicants for the protection of the Fish and Wildlife Propagation and Public and Private Water beneficial uses, a minimum of 5 samples shall be required.

(2) In order to satisfy the minimum sample requirements of this sub-section, samples may be aggregated consistent with the spatial and temporal requirements prescribed in (b), (c), and (d) of this Section.

(3) The prescribed minimum samples shall not be necessary if the available samples already assure exceedance of the applicable percentage for beneficial use assessment.

(4) If a mathematical calculation including, but not limited to, a mean, median, or quartile, is required for assessment, a minimum of ten samples shall be required, regardless of the parameter type.

(5) Additional samples for the calculation of temperature, pH and hardness dependent acute and chronic criteria shall be collected as required by OAC 252:740-5-4.

(e) **Application of PQL.**

(1) **Criteria above PQL.**

(A) If sample values are below the PQL for a parameter whose criterion is above the PQL, appropriate nonparametric statistical measures shall be used to determine the reporting value.

(B) For waterbodies identified as impaired on the current 303(d) List or 305(b) Report, if sample values are nondetectable for a parameter whose criterion is above the PQL, then such value shall be deemed to be one-half (1/2) of the parameter PQL.

(C) All sample values that are above the PQL shall be the reported values.

(2) **Criteria equal to or below PQL.**

(A) If sample values are below the PQL for a criterion which is less than one-half (1/2) of



the PQL, then the values shall be deemed to be zero (0) until the first test result above the PQL appears. After that time, sample values which are below the PQL shall be deemed to be equal to the criterion value until four (4) subsequent contiguous samples are shown to be below the PQL. Any subsequent sample values which are nondetectable may be treated as zero (0) until the next test result appears above the PQL.

(B) For those parameters whose criteria are at least two (2) orders of magnitude below the PQL, evidence considered with respect to assessment of use support shall include fish tissue analysis, biological community analysis, biological thresholds wherever available, or other holistic indicators which are appropriate for the beneficial use in question.

(C) If sample values are below the PQL for a criterion which is greater than or equal to one-half (1/2) of the PQL but less than the PQL, then the values shall be deemed to be one-half (1/2) of the criterion value until the first test result above the PQL appears. After that time, sample values which are below the PQL shall be deemed to be equal to the criterion value until four (4) subsequent contiguous samples are shown to be below the PQL. Any subsequent sample values which are nondetectable may be treated as equal to one-half (1/2) of the criterion value until the next test result appears above the PQL.

(D) For waterbodies identified as impaired on the current 303(d) List or 305(b) Report, if sample values are nondetectable for a parameter whose criterion is below the PQL, then such value shall be deemed to be one-half (1/2) of the criterion value.

(E) All sample values that are above the PQL shall be the reported values.

(f) **Magnitude of criteria exceedance.**

(1) **General.** The magnitude of exceedance, as well as frequency of exceedances, shall be used in determining beneficial use support. Samples shall be taken only during conditions when criteria apply.

(2) **Toxicants.** If two or more concentrations of toxicants exceed criteria or screening levels to protect human health or aquatic life by two orders of magnitude or more, the associated beneficial use shall be deemed to be not supported.

(3) **Dissolved oxygen.** If more than two concentrations of DO in a stream are observed to be below 2 mg/L in any given year, the Fish and Wildlife Propagation beneficial use shall be deemed to be not supported.

(4) **Other parameters.** The magnitude and frequency of exceedances to be used for determining beneficial use support for parameters other than toxicants and DO shall be as prescribed in the rules elsewhere in this Subchapter.

(g) **Quality assurance.** On and after July 1, 2002, data collected for purposes of use support assessment shall be collected using documented programmatic quality assurance and quality control methods substantially in accordance with those required by "~~EPA Requirements for Quality Assurance Project Plans~~", EPA publication no. ~~EPA/240/B-01/003 (March 2001)~~ Quality Assurance project Plan Standard," EPA Directive No: CIO 2105-S-02.0 (July 2023). The sampling and testing methods used shall protect the integrity of the sample and provide detailed documentation of analysis.