CHAPTER 606. OKLAHOMA POLLUTANT DISCHARGE ELIMINATION SYSTEM (OPDES) STANDARDS

[**Authority:**27A O.S., §§ 1-3-101, 2-2-101, 2-2-104, 2-2-201, and 2-6-201 et seq.]
[**Source:**27A O.S., §§ 1-3-101, 2-2-101, 2-2-104, 2-2-201, and 2-6-201 et seq.; Codified 6-11-04]

SUBCHAPTER 1. INTRODUCTION

252:606-1-1. Purpose

(a) **Intent.** This Chapter sets the point source, biosolids (sewage sludge), and stormwater permitting standards for discharges to the waters of the State of Oklahoma from those facilities within the jurisdiction of the Oklahoma Department of Environmental Quality as specified in Title 27A O.S. § 1-3-101. This Chapter implements the Oklahoma Pollutant Discharge Elimination System Act, which begins at Title 27A O.S. § 2-6-201 of the Oklahoma Statutes. This Chapter applies to any person or entity that land applies biosolids or prepares it for firing in a biosolids (sewage sludge) incinerator, in addition to those facilities that discharge wastewater to waters of the state.

(b) **Other rules apply.** This Chapter applies in addition to other rules. This Chapter governs the effluent discharged from municipal wastewater treatment systems (constructed under OAC 252:656) and industrial wastewater treatment systems (constructed under OAC 252:616), and current DEQ Laboratory Accreditation rules. The discharges regulated by this Chapter must not cause a violation of the Oklahoma Water Quality Standards (OAC 252:730).

(c) **Exclusion.** This Chapter does not apply to:

(1) discharges from marine toilets, as prohibited by Title 63 O.S. § 4213;

(2) discharges of dredge and fill material under the jurisdiction of the United States Corps. of Engineers under Section 404 of the Federal Clean Water Act. Water in a treatment system is OPDES Permit Schedule Violation not waters of the State of Oklahoma;

(3) Septage. See OAC 252:645;

(4) Biosolids pilot studies that are conducted by a qualified research institute familiar with the crops and soils of this state for the beneficial use of biosolids through land application. Such studies are subject to conditions imposed by the DEQ, including:

(A) the limitation of the total amount of biosolids used must be no more than 25 dry tons for any one project or 50 dry tons for all pilot studies approved by DEQ for the same institute in the same year;

(B) compliance with:

(i) The metal ceilings established in Table 1 of Title 40 of the Code of Federal Regulations ("40 CFR") § 503.13(b);

(ii) One of the vector attraction reduction alternatives; and

(iii) The pathogen reduction requirements of 40 CFR § 503.32(a);

(C) written approval from DEQ Executive Director or his designee prior to the commencement of operations;

(D) the period during which biosolids may be applied to the land is 18 months or less, unless extended by DEQ;

(E) notification to DEQ of the cessation of land application at the site; and

(F) periodic reporting.

(5) Biosolids co-fired in an incinerator with other wastes or for the incinerator in which biosolids and other wastes are co-fired are regulated under the appropriate Air Quality Rules. Other wastes do not include auxiliary fuel, as defined in 40 CFR § 503.41(b), fired in a sewage sludge incinerator.

(6) Sludge generated at an industrial facility during the treatment of industrial wastewater, including sludge generated during the treatment of industrial wastewater combined with domestic sewage.

(7) Use of biosolids determined to be hazardous in accordance with 40 CFR Part 261 which must be disposed of in a manner in accordance with the Oklahoma Hazardous Waste Management Act

and rules promulgated thereunder;
(8) Ash generated during the firing of biosolids in a sewage sludge incinerator;
(9) Grit (e.g., sand, gravel, cinders, or other materials with a high specific gravity) or screenings (e.g., relatively large materials such as rags) generated during preliminary treatment of domestic sewage in a treatment works.
(10) Biosolids with a concentration of Polychlorinated Biphenyl (PCB) equal to or greater than 10 milligrams per kilogram (10.0 mg\kg) of total solids (dry weight basis) may not be land applied under this Chapter. Disposal must be in accordance with OAC 252:515 ("Management of Solid Waste" rules) and applicable federal requirements under the Toxic Substances Control Act, 15 U.S.C. § 2601 *et seq.*

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 32 Ok Reg 977, eff 9-15-15; Amended at 40 Ok Reg 241, eff 10-25-22 (emergency); Amended at 40 Ok Reg 2018, eff 9-15-23; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-1-2. Definitions

In addition to terms defined in Title 27A of the Oklahoma Statutes, the following words or terms, when used in this Chapter, have the following meaning unless the context clearly indicates otherwise:
"Accredited laboratory" means a laboratory accredited through DEQ laboratory accreditation program.
"Acute WET testing" means WET testing which measures short-term lethality to a specific aquatic animal test species as specified in OAC 252:606-6-29.
"Arithmetic mean" means the sum of the values of individual data points in a data set divided by the number of data points. This term is synonymous with arithmetic average.
"Background concentration" means the concentration of a substance in receiving water immediately upstream of, but not influenced by, a wastewater discharge.
"Beneficial use" means a classification of the waters of the State, according to their best uses in the interest of the public. These classifications are provided in OAC 252:730-5-3.
"Best professional judgment" or "**BPJ**" means the technical opinion developed by a permit drafter after consideration of all reasonably available and pertinent data or information which forms the basis for the terms and conditions of a discharge permit, and the use of sound engineering analysis of the industry, the nature and quantity of potential pollutants which may be produced and of the proposed treatment plant.
"Biosolids" means primarily organically treated wastewater materials from municipal wastewater treatment plants that are suitable for recycling as amendments. This term is within the meaning of "sludge" referenced in 27A O.S. § 2-6-101(11). Biosolids are divided into the following classes:
(A) Class A Biosolid meets the pathogen reduction requirements of 40 CFR § 503.32 (a);
(B) Class B Biosolid meets the pathogen reduction requirements of 40 CFR § 503.32 (b).
"CAFO" means Concentrated Animal Feeding Operation.
"Chronic WET testing" means WET testing which measures long term lethal and sublethal effects to a specific aquatic animal test species as specified in OAC 252:606-6-29.
"Coefficient of variation" or **"CV"** means, when used in the context of effluent data, the measure of an effluent distribution's variation relative to its mean. When used in the context of WET test acceptability, CV means the % variation among test replicates in either the control or the critical dilution.
"Compliance Testing" means any chemical, physical or bacteriological tests conducted in accordance with permit requirements.
"Control tests" means any chemical, physical or bacteriological tests, including visual observations, performed to aid in operational decisions and to control wastewater treatment system performance.
"CPP" means the Continuing Planning Process document, which describes present and planned water quality management programs and the strategy used by the State in conducting these programs.
"Critical dilution" means an effluent dilution, expressed as a percentage, representative of the dilution afforded a wastewater discharge according to the appropriate Q*-dependent chronic mixing zone equation for chronic WET testing. The critical dilution for acute WET testing is 100%.
"CWA" means the Clean Water Act and amendments thereto.
"Defensible analytical data" means data traceable to a laboratory certified for that pollutant by DEQ under OAC 252:301 or data accepted by EPA; data traceable to a municipal laboratory operated by a properly certified laboratory technician by OAC 252:710; or data generated by a state or federal agency

laboratory with equivalent certification. Quality assurance procedures, including chain of custody records, shall be adequate and documentable. Quality control data required in the analytical method shall be available from the laboratory upon request.
"DEQ" means the Oklahoma Department of Environmental Quality.
"Detectable concentration" means a concentration greater than zero (0) using a ninety-nine percent (99%) probability basis.
"Dilution series" means a set of proportional effluent dilutions for acute or chronic WET testing based on a specified critical dilution, which is typically the next-to-highest dilution in the series.
"Discharge point" means the point at which pollutants, wastewater or stormwater enters waters of the state or become waters of the state.
"DMR" means "Discharge Monitoring Report".
"EPA" means the United States Environmental Protection Agency.
"Fish and Wildlife Propagation" means the WQS beneficial use designation for promoting fish and wildlife propagation for the fishery classifications of HLAC, WWAC, CWAC, and Trout Fishery (Put and Take).
"Fish Consumption" means the WQS beneficial use designation for the protection of human health for the consumption of fish flesh.
"Generator" or **"operator"** means authorized person under whose ownership or management authority, biosolids are used or disposed.
"Geometric mean" means the antilog of the arithmetic average of the natural logarithms of the individual points in a data set.
"Impoundment" or **"Surface impoundment"** have the same meaning used in OAC 252:616-1-2.
"Industrial user" means "industrial users subject to categorical pretreatment standards" and "significant industrial users" as those terms are used in 40 CFR, Part 403.
"Intermittent toxicity" means two or more lethal or sublethal effect test failures of a routine acute or chronic WET test within any 18-month period.
"Land application" means the application of biosolids onto a land surface; injection below land surface; or spreading biosolids onto land surface followed by incorporation into the soil. Land application does not include the disposal of biosolids in a municipal solid waste landfill permitted by DEQ, or the use of Class A biosolids whose production is permitted by DEQ.
"LC_{50} (lethal concentration)" means the concentration of a toxicant in an external medium that is lethal to fifty percent of the test animals for a specified period of exposure.
"Life of the permit" means a specific time frame from the date of the issuance of a permit until a new or renewed permit is issued.
"Listed metal" means those metals listed in Tables I, II, and III of 40 CFR, Part 503.13.
"Loading rate" means the amount (concentration or mass) of constituents or parameters applied to a unit area per application.
"Log-normally distributed" means a distribution of effluent data which is positively skewed.
"Log transformation" means the mathematical transformation of an observed data set which results in a data set consisting of the natural logarithms of the individual data points in the observed data set.
"Major discharger" means an industrial facility which has a point rating greater than or equal to 80 according to the NPDES permit rating system for industrial discharges; a POTW with a design flow greater than or equal to 1.0 MGD; or any facility designated as such by EPA in conjunction with the state permitting authority.
"Measurable level" means a detectable concentration for which the analytical signal to noise ratio is significantly high to report a reliable single number. The measurable level corresponds to the lowest point at which the analytical calibration curve is determined based on analyses for the pollutant of concern.
"Mineral constituents" means chlorides, sulfates and total dissolved solids collectively.
"Municipal" means a publicly owned treatment works or facilities which are privately owned that generate only domestic waste including mobile home parks, homeowner's associations, etc.
"Narrative water quality criterion" means a statement or other qualitative expressions of chemical, physical, or biological parameters that is assigned to protect a beneficial use.
"No Observed Effect Concentration-Lethal" or **"NOECL"** means the greatest tested effluent dilution in a WET test at and below which lethality to test organisms does not occur that is statistically different from

the control (0% effluent) at the 95% confidence level.
"No Observed Effect Concentration-Sublethal" or **"NOECS"** means the greatest tested effluent dilution in a WET test at and below which a sublethal effect to test organisms does not occur that is statistically different from the control (0% effluent) at the 95% confidence level.
"NRCS" means Natural Resources Conservation Service.
"Numerical water quality criterion" means a concentration or other quantitative measures of a chemical, physical, or biological parameters that is assigned to protect a beneficial use.
"OAC" means Oklahoma Administrative Code.
"Oklahoma Water Quality Standards" or **"WQS"** means DEQ rules (OAC 252:730) which classify waters of the state, designate beneficial uses for which the various waters of the state must be maintained and protected, and prescribe the water quality required to sustain designated uses.
"Once-through cooling water" means cooling water that is not recirculated.
"OPDES" means Oklahoma Pollutant Discharge Elimination System (see also NPDES).
"OPDES Act" means the Oklahoma Pollutant Discharge Elimination System Act.
"OPDES Permit" means a permit issued pursuant to the OPDES Act.
"O.S." means Oklahoma Statutes.
"Operating records and reports" means the daily record of data connected with the operation of the system compiled in a monthly report on forms approved by DEQ.
"Period of Record" means a continuous period for which a facility's effluent data is reviewed for the purposes of characterizing the effluent.
"Permit cycle" means the life of a permit from the date of issuance to the date of expiration as specifically stated on a permit, unless the expiration of the permit is extended by operation of statute, rule or agreement of the permittee and DEQ.
"Persistent toxicity" means the repeated failure of an acute or chronic WET test. If the required WET testing frequency is monthly, repeated failure occurs upon the failure of two of the three consecutive monthly tests for the same test species. If the required WET testing frequency is other than monthly, repeated failure occurs upon the failure of the required test plus one of the two monthly retests for the same test species in the ensuing two-month period.
"Point Source" means any discernible, confined and discrete conveyance or outlet, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft, from which pollutants are or may be discharged into waters of the state. The term "point source" shall not include agricultural stormwater runoff and return flows from irrigated agriculture.
"Positively skewed" means a data distribution which is asymmetric about its arithmetic mean with a tail in the positive direction.
"POTW" means publicly owned treatment works.
"Reasonable potential" means causes, or has a reasonable potential to cause, or contribute to an exceedance of a water quality criterion.
"Receiving water" means the water of the state to which a wastewater is discharged.
"Regulatory effluent flow" means the effluent flow, which is water quality criterion-dependent, used in determining reasonable potential and wasteload allocations for a substance.
"Regulatory low flow" means a condition where the flow of water in a stream is significantly reduced, often during prolonged dry weather. This phenomenon is characterized by a decrease in stream flow, which can be defined by specific statistics such as the 7Q2 or 30Q2. Regulatory low flow is important for setting permit discharge limits and ensuring ecological protection, as it can lead to water quality issues and affect water resources.
"Robust Regression on Order Statistics" or **"Robust ROS"** means a statistical method that computes a regression line to estimate values for non-detect data and combines these estimates with detected observations to compute sample statistics.
"RPF_{95}" means the reasonable potential factor for an effluent distribution, based on a 95% probability basis, for the purpose of determining whether an effluent limitation is required.
"$RPF_{95(M)}$" means the reasonable potential factor for an effluent distribution, based on a 95% confidence interval and 95% probability basis, and accounting for the size of the effluent data set, for the purpose of determining whether further effluent monitoring is required.

"Standard deviation" or **"s_x"** means the standard deviation of an untransformed data set based on a sample of size N.
"Standard deviation of log-transformed x" or **"sln(x)"** means the standard deviation of a log-normally transformed data set based on a sample of size N.
"Sublethal test failure" means the statistically significant difference (at the 95% confidence level) between reproduction or growth of the test organism at or below the chronic critical dilution after completion of an EPA approved chronic test method.
"TDS" means total dissolved solids.
"Trigger Background concentration" means the background concentration necessary to trigger reasonable potential for a substance to exceed an applicable criterion given a specified mean effluent concentration.
"USC" means United States Code.
"Wasteload allocation" or **"WLA"** means the portion of a receiving water's that is allocated to one of its existing or future point sources of pollution.
"WET limit" means a WET testing limitation in the form of a $NOEC_L$, $NOEC_S$, or LC_{50}, the exceedance of which constitutes a permit violation.
"WET testing" means testing for whole effluent toxicity:

(A) using an effluent dilution series based on a critical dilution,
(B) with a specific aquatic animal species, and
(C) utilizing EPA-approved testing methods.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 26 Ok Reg 1901, eff 7-1-09; Amended at 28 Ok Reg 1231, eff 7-1-11; Amended at 32 Ok Reg 977, eff 9-15-15; Amended at 40 Ok Reg 241, eff 10-25-22 (emergency); Amended at 40 Ok Reg 2018, eff 9-15-23; Amended at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 43 Ok Reg, Number 21, effective 9-15-26]

252:606-1-2.1. Technical Definitions
The following technical definitions, when used in this Chapter, shall have the following meaning:
"**ΔT_{max}**" means the maximum temperature increase in ℃ at the edge of the temperature mixing zone.
"**7Q2**" means the 7-day low flow of a stream likely to occur with a 50% probability each year. The procedure for determining a site-specific 7Q2 is described at OAC 252:740-1-6.
"30Q2" means the 30-day low flow of a stream likely to occur with a 50% probability each year.
"**ACD**" means acute critical dilution.
"**BOD_5**" means 5-day biochemical oxygen demand.
"**BT/C ratio**" means the ratio of trigger background concentration to associated water quality criterion.
"**$(BT/C)_{max}$**" means the maximum BT/C ratio for a given criterion for which background monitoring is required as a permit condition.
"**C_{95}**" means the 95th percentile maximum likelihood effluent concentration of a substance. It is the product of $CE_{(mean)}$ and RPF_{95}.
"**$C_{95(M)}$**" means the 95th percentile maximum likelihood effluent concentration of a substance, accounting for the size of the effluent data set. It is the product of $C_{E(max)}$ and $RPF_{95(M)}$.
"**C_A**" means the acute numerical criterion for toxic substances.
"**C_B**" means background concentration.
"**C_C**" means the chronic numerical criterion for toxic substances.
"**C_d**" means the instream concentration of a substance resulting from a wastewater discharge.
"**$C_{d(A)}$**" means the instream concentration of a substance as determined by the acute mixing equation.
"**$C_{d(c)}$**" means the maximum instream concentration of a substance at the edge of the chronic mixing zone.
"**$C_{d(FF)}$**" means the instream concentration of a substance after complete mixing, as applied to determination of reasonable potential to exceed a human health criterion for the consumption of fish flesh.
"**$C_{d(FFW)}$**" means the instream concentration of a substance after complete mixing, as applied to determination of reasonable potential to exceed a human health criterion for the consumption of fish flesh

and water.
"**$C_{d(NRWQC)}$**" means the instream concentration of a substance after complete mixing, as applied to determination of reasonable potential to exceed an EPA human health criterion for the consumption of fish flesh.
"**$C_{d(RAW)}$**" means the instream concentration of a substance after complete mixing, as applied to determination of reasonable potential to exceed a raw water column criterion.
"**$C_{d(SS)}$**" means the instream concentration of a substance after complete mixing, as applied to determination of reasonable potential to exceed an agriculture sample standard (SS).
"**$C_{d(YMS)}$**" means the instream concentration of a substance after complete mixing, as applied to determination of reasonable potential to exceed an agriculture yearly mean standard (YMS).
"**$C_{E(max)}$**" means the maximum concentration of a substance in an effluent data set.
"**$C_{E(mean)}$**" means mean effluent concentration.
"**C_{FF}**" means the numerical criterion for the protection of human health for the consumption of fish flesh.
"**C_{FFW}**" means the numerical criterion for the protection of human health for the consumption of fish flesh and water.
"**C_{NRWQC}**" means the EPA recommended national water quality criterion for the protection of human health for the consumption of fish flesh.
"**C_{RAW}**" means the numerical criterion for protection of the raw water column.
"**C_{SS}**" means agriculture sample standard numerical criterion, i.e., the historic segment averaged SS value from Appendix F of OAC 252:730, unless data more representative of the receiving stream are available.
"**C_{YMS}**" means agriculture yearly mean standard numerical criterion, i.e., the historic segment averaged YMS value from Appendix F of OAC 252:730, unless data more representative of the receiving stream are available.
"**$CBOD_5$**" means 5-day carbonaceous biochemical oxygen demand.
"**CCD**" means chronic critical dilution.
"**CWAC**" means cool water aquatic community.
"**D**" means, in the context of a discharge to a lake through a pipe, the pipe diameter in feet.
"**DML**" means daily maximum permit limitation.
"**DML_{CL}**" means agriculture criterion-based DML for chlorides.
"**DML_{FF}**" means the human health/fish flesh DML.
"**DML_{FFW}**" means the human health/fish flesh and water DML.
"**DML_{HH}**" means human health-based DML.
"**DML_{RAW}**" means the raw water column DML.
"**DML_{SO4}**" means agriculture criterion-based DML for sulfates.
"**DML_T**" means the temperature based DML.
"**DML_{TDS}**" means agriculture criterion-based DML for total dissolved solids (dried at 180°C).
"**DML_{TOX}**" means toxic substance-based DML.
"**DO**" means dissolved oxygen.
"**HLAC**" means habitat-limited aquatic community.
"**LTA**" means long-term average.
"**LTA_A**" means the toxic substance acute numerical criterion LTA.
"**LTA_C**" means the toxic substance chronic numerical criterion LTA.
"**LTA_{FF}**" means the fish flesh human health criterion LTA.
"**LTA_{FFW}**" means the fish flesh and water human health criterion LTA.
"**LTA_{RAW}**" means the raw water column criterion LTA.
"**LTA_{SS}**" means the agriculture sample standard LTA.
"**LTA_T**" means the temperature criterion LTA.

"**LTA_{TOX}**" means the limiting toxic substance-based LTA, i.e., the smallest of LTA_A or LTA_C, as applicable.
"**LTA_{YMS}**" means the agriculture yearly mean standard LTA.
"**MAL**" means monthly average permit limitation.
"**MAL_A**" means the toxic substance acute criterion MAL.
"**MAL_C**" means the toxic substance chronic criterion MAL.
"**MAL_{CL}**" means agriculture criterion-based MAL for chlorides.
"**MAL_{FF}**" means the human health/fish flesh MAL.
"**MAL_{FFW}**" means the human health/fish flesh and water MAL.
"**MAL_{RAW}**" means the raw water column MAL.
"**MAL_{HH}**" means human health-based MAL.
"**MAL_{SO4}**" means agriculture criterion-based MAL for sulfates.
"**MAL_T**" means temperature MAL.
"**MAL_{TDS}**" means agriculture criterion-based MAL for total dissolved solids (dried at 180℃).
"**MAL_{TOX}**" means toxic substance-based MAL.
"**MGD**" means million gallons per day.
"**mg/L**" means milligrams per liter.
"**MQL**" means minimum quantifiable level.
"**N**" means the number of individual data points, collected over time, in an effluent or background data set.
"**N_m**" means the per month monitoring frequency where a permit limitation is established. When used in the context of temperature limitations, Nm is equal to four times Nw (i.e., Nm = 4 × Nw).
"**N_w**" means the per week monitoring frequency where a temperature permit limitation is established.
"**NRWQC**" means the National Recommended Water Quality Criteria, publication no. EPA 822-Z-99-001, April 1999.
"**PBCR**" means Primary Body Contact Recreation.
"**Q***" means the ratio of the regulatory effluent flow to the regulatory receiving water flow.
"**Q_e**" means regulatory effluent flow.
"**$Q_{e(30)}$**" means the Q_e that is the highest monthly average flow over the two-year period of record for an industrial facility. For intermittent dischargers, $Q_{e(30)}$ is calculated based on the days when discharge actually occurs.
"**$Q_{e(D)}$**" means the Qe that is the lesser of the design flow for a municipal POTW or the design flow listed in the Section 208 Areawide Basin Plan.
"**$Q_{e(LTA)}$**" means the Qe that is the arithmetic long-term average flow over the two-year period of record for an industrial facility.
"**Q_u**" means regulatory receiving water flow upstream of a point of wastewater discharge.
"**$Q_{u(7Q2)}$**" means the same as 7Q2.
"**$Q_{u(30Q2)}$**" means the same as 30Q2.
"**$Q_{u(LTA)}$**" means the Q_u that is the mean annual long-term receiving water flow.
"**$Q_{u(STA)}$**" means the Qu that is the short-term average receiving water flow and is equal to $Q_{u(LTA)} \times 0.68$.
"**SBCR**" means Secondary Body Contact Recreation
"**SNC**" means significant noncompliance.
"**SS**" means sample standard.
"**T_a**" means regulatory ambient temperature in℃.
"**T_{95}**" means the 95th percentile of the effluent temperature distribution (in℃) of sustained two-hour daily maximum effluent temperatures where effluent temperature is recorded continuously and the distribution of daily maximum effluent temperatures where temperature is recorded at discrete intervals of two hours or longer, provided that recording intervals for temperature do not exceed six hours.
"**TIE**" means toxicity identification evaluation.

"**TRC**" means total residual chlorine.
"**TRO**" means total residual (halogenated) oxidants.
"**µg/L**" means micrograms per liter.
"**W**" means, in the context of a discharge to a lake through an open channel (i.e., canal), the channel width in feet.
"**WAL**" means weekly average permit limitation.
"**WAL_T**" means temperature WAL.
"**WET**" means whole effluent toxicity.
"**WLA_A**" means a toxic substance acute criterion WLA.
"**WLA_C**" means a toxic substance chronic criterion WLA.
"**WLA_{FF}**" means a human health/fish flesh criterion WLA.
"**WLA_{FFW}**" means a human health/fish flesh and water criterion WLA.
"**WLA_{RAW}**" means a raw water column criterion WLA.
"**WLA_{SS}**" means an agriculture sample standard WLA.
"**WLA_T**" means a temperature criterion WLA.
"**WLA_{YMS}**" means an agriculture yearly mean standard WLA.
"**WQMP**" means the statewide Section 208 Water Quality Management Plan.
"**WWAC**" means warm water aquatic community.
"**YMS**" means yearly mean standard.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 43 Ok Reg, Number 21, effective 9-15-26]

252:606-1-3. Adoption of U.S. EPA regulations by reference

(a) **Interpretation of rules.** Narrative provisions of this Chapter apply control over any provision of regulations of the Environmental Protection Agency (EPA) which are adopted by reference. The rules set forth in this Chapter are interpreted consistently with state compliance with the requirements of 40 CFR Part 123 (EPA Regulations on State NPDES Permit Program Requirements), and applicable provisions of the federal Clean Water Act and Oklahoma law.

(b) **Federal regulations adopted.** The following provisions of Title 40 of the CFR and the requirements contained therein are, unless otherwise specified, adopted and incorporated by reference in their entirety:

(1) Part 116 (Hazardous Substances List) (except § 116.3 (*Navigable Waters*)(4))

(2) Part 117 (Reportable Quantities for Hazardous Substances) (except § 117.1 (*Navigable Waters*)(4))

(3) The following from PART 122 (NPDES PERMIT REGULATIONS):

(A) 122.1(b) - (scope of NPDES permit requirements)
(B) 122.2 - (definitions) (except (*Waters of the United States*)(4))
(C) 122.3 - (exclusions)
(D) 122.4 - (prohibitions)
(E) 122.5 - (effect of permit)
(F) 122.6 - (continuation of expiring permits)
(G) 122.7(b) and (c) - (confidential information)
(H) 122.21 - (application for a permit)
(I) 122.22 - (signatories)
(J) 122.24 - (concentrated aquatic animal production facilities)
(K) 122.25 - (aquaculture projects)
(L) 122.26 - (stormwater discharges)
(M) 122.27 - (silviculture)
(N) 122.28(a) and (b) - (general permits)
(O) 122.29 - (new sources and new dischargers)
(P) 122.30 - What are the objectives of the storm water regulations for small MS4s?
(Q) 122.31 - As a tribe, what is my role under the NPDES storm water program?

(R) 122.32 - As an operator of a small MS4, am I regulated under the NPDES storm water program?
(S) 122.33 - Requirements for obtaining permit coverage for regulated small MS4s.
(T) 122.34 - Permit requirements for regulated small MS4 permits.
(U) 122.35 - May the operator of a regulated small MS4 share the responsibility to implement the minimum control measures with other entities?
(V) 122.36 - As an operator of a regulated small MS4, what happens if I don't comply with the application or permit requirements in §§ 122.33 through 122.35?
(W) 122.41 - (permit conditions)
(X) 122.42 - conditions for specified categories of permits)
(Y) 122.43 - establishing permit conditions)
(Z) 122.44 - (establishing permit limitations, standards and other conditions)
(AA) 122.45 - (calculating permit conditions)
(BB) 122.46 - (permit duration)
(CC) 122.47(a) - (schedules of compliance)
(DD) 122.48 - (monitoring requirements)
(EE) 122.50 - (disposal into wells)
(FF) 122.61 - (permit transfer)
(GG) 122.62 - (permit modification)
(HH) 122.63 - (minor modifications of permits)
(II) 122.64 - (permit termination)
(JJ) Appendices A through I

(4) The following from PART 124 (Procedures for Decision making):
(A) 124.1 - (introduction)
(B) 124.2 - (definitions)
(C) 124.3(a), (c), and (d) - (application for a permit)
(D) 124.5(a), (c), (d) and (f) - (modification of permits)
(E) 124.6(a), (c), (d) and (e) - (draft permit)
(F) 124.7 - (statement of basis of conditions where no fact sheet is adopted)
(G) 124.8 - (fact sheet)
(H) 124.10(a)(1)(ii), (a)(1)(iii), (a)(1)(iv), (b), (c), (d), and (e) - (public notice)
(I) 124.11 - (public comments and requests for hearings)
(J) 124.12(a) and (c) - (public hearings)
(K) 124.13 - (obligation of protestors, etc., to raise all issues)
(L) 124.14 - (reopening)
(M) 124.15 - (issuance & effective dates of permits)
(N) 124.17(a) and (c) - (response to comments)
(O) 124.51(a) and (b) - (specific permitting procedures-purpose and scope)
(P) 124.52 - (permits required on a case-by-case basis)
(Q) 124.56 - (fact sheets)
(R) 124.57(a) - (public notice)
(S) 124.59 - (comments from government agencies)
(T) 124.62 - (decision on variances)
(U) 124.66 - (thermal variance procedures)

(5) The following from PART 125 (criteria and standards for NPDES):
(A) Subpart A (technology-based treatment),
(B) B (criteria for aquaculture projects),
(C) D (fundamentally different factors),
(D) H (alternative effluent limitations),
(E) I (new cooling water intakes), and
(F) J (existing cooling water intakes).
(G) Subpart L (disposal of sewage sludge under CWA 405)

(6) 40 CFR Part 129 (Toxic Pollutant Effluent Standards)

(7) 40 CFR Part 136 (testing and laboratory)

(8) 40 CFR §§ 401-471 (Effluent Guidelines and Standards) (except § 401.11 (*Navigable Waters*) (4))
(9) 40 CFR § 110.6 (notice of oil discharge) and
(10) 40 CFR Part 302 (Reportable Quantities and Notification) (except § 302.3 (*Navigable Waters*) (4))

(c) **The following provisions of 40 CFR that are applicable to biosolids are hereby incorporated by reference, subject to any modifications and additional requirements specified in this Chapter:**

(1) The following Sections from Part 503, Subpart A (General Provisions):
- (A) 503.1 (Purpose and applicability)
- (B) 503.2 (Compliance period)
- (C) 503.3 (Permits and direct enforceability)
- (D) 503.4 (Relationship to other regulations)
- (E) 503.5 (Additional or more stringent requirements)
- (F) 503.6(a)-(e), (g)-(j) (Exclusions)
- (G) 503.7 (Requirement for a person who prepares biosolids)
- (H) 503.8 (Sampling and analysis)
- (I) 503.9 (General definitions)

(2) The following Sections from Part 503, Subpart B (Land Application):
- (A) 503.10(a),(b)(1)&(2),(e),(f),(g) (Applicability)
- (B) 503.11 (Special definitions)
- (C) 503.12 (General requirements)
- (D) 503.13 (Pollutant limits)
- (E) 503.14 (Management practices)
- (F) 503.15 (Operational standards - pathogens and vector attraction reduction)
- (G) 503.16(a) (Frequency of monitoring)
- (H) 503.17(a) (Recordkeeping)
- (I) 503.18 (Reporting)

(3) The following Sections from Part 503, Subpart D (Pathogens and Vector Attraction Reduction):
- (A) 503.30 (Scope)
- (B) 503.31 (Special definitions)
- (C) 503.32(a), (b) (Pathogens)
- (D) 503.33(a), (b)(1)-(11) (Vector attraction reduction)

(4) The following Sections from Part 503 Subpart E (Incineration):
- (A) 503.40 (Applicability)
- (B) 503.41 (Special definitions)
- (C) 503.42 (General requirements)
- (D) 503.43 (Pollutant (Metal) limits)
- (E) 503.44 (Operational standard - total hydrocarbons)
- (F) 503.45 (Management practices)
- (G) 503.46 (Frequency of monitoring)
- (H) 503.47 (Recordkeeping)
- (I) 503.48 (Reporting)

(5) The following Appendices from Part 503:
- (A) Appendix A (Procedure to determine the annual whole biosolids application rate for a biosolids)
- (B) Appendix B (Pathogen treatment processes)

(d) **Exclusions.** Provisions of 40 CFR relating to CAFOs are excluded because they are beyond the jurisdiction of this Chapter.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 24 Ok Reg 1522, eff 6-15-07; Amended at 31 Ok Reg 1292, eff 9-12-14; Amended at 36 Ok Reg 1607, eff 9-15-19; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-1-4. Date of federal regulations incorporated

When reference is made to 40 CFR it means, unless otherwise specified, the volume of 40 CFR as published on January 17, 2025.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 42 Ok Reg, Number 22, effective 9-15-25; Amended at 43 Ok Reg, Number 21, effective 9-15-26; Amended at 40 Ok Reg 2018, eff 9-15-23; Amended at 39 Ok Reg 1096, eff 9-15-22; Amended at 38 Ok Reg 1837, eff 9-15-21; Amended at 36 Ok Reg 1607, eff 9-15-19; Amended at 34 Ok Reg 1224, eff 9-15-17; Amended at 33 Ok Reg 1471, eff 9-15-16; Amended at 32 Ok Reg 977, eff 9-15-15; Amended at 31 Ok Reg 1297, eff 9-12-14; Added at 30 Ok Reg 1083, eff 7-1-13; Amended at 29 Ok Reg 633, eff 7-1-12; Amended at 28 Ok Reg 1231, eff 7-1-11; Amended at 27 Ok Reg 2157, eff 7-11-10; Amended at 26 Ok Reg 1901, eff 7-1-09; Amended at 25 Ok Reg 2272, eff 7-11-08; Amended at 24 Ok Reg 1522, eff 6-15-07; Amended at 23 Ok Reg 1768, eff 6-15-06; Amended at 22 Ok Reg 1467, eff 6-15-05; Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-1-5. Terminology in incorporated federal regulations

(a) As used in the incorporated federal regulations, unless the context clearly indicates otherwise:

(1) **"Administrator", "Regional Administrator"** and **"State Director"** are synonymous with Executive Director of DEQ;

(2) **"Clean Water Act"** and **"CWA"** are synonymous with the Oklahoma Pollutant Discharge Elimination System Act, Title 27A § 2-6-201 and following;

(3) **"State"** is synonymous with DEQ.

(4) **"Evidentiary hearing"** is synonymous with administrative hearing.

(5) **"Public hearing"** is synonymous with public meeting.

(b) Federal statutes and regulations that are cited in federal regulations incorporated by reference herein may be used as guidance.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-1-6. Spill reporting

(a) **Report.** The owner or operator of a facility or vessel must report to DEQ any spill or discharge to the waters of the state on or from the facility or vessel according to 40 CFR Part 117. Reports to the DEQ may be telephoned to the Complaints Hotline at (800) 522-0206.

(b) **Response.** Whenever a spill or discharge occurs that is required by 40 CFR Part 117 and this rule to be reported to DEQ, the owner or operator of the facility or vessel must immediately act to stop, contain, clean up and prevent recurrence of the spill or discharge.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 32 Ok Reg 977, eff 9-15-15; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

SUBCHAPTER 3. DISCHARGE PERMITTING PROCESS FOR INDIVIDUAL AND GENERAL DISCHARGE PERMITS

252:606-3-1. Access and use

An applicant must acquire or possess a right to use and access the property on which discharge points, facilities, activities or discharge sources are located. The owner/operator must maintain such rights for the duration of the permit term, and provide documentary proof to DEQ.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-3-2. Discharge to storm sewer

Upon filing, any applicant proposing to discharge to a storm sewer must provide one copy of the application to the municipality having jurisdiction over such storm sewer.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-3-3. OPDES permit

(a) **OPDES permit applications.** When submitting a permit application for the initial issuance or re-issuance of an OPDES permit:

(1) analyses reported for industrial discharges must be performed by laboratories accredited by DEQ, and

(2) analyses reported for municipal discharges must be performed at a minimum by an operator certified by the DEQ, as specified in this Chapter.

(b) **Additional OPDES permit requirements.** DEQ may include in the permit statements of, or may incorporate by reference, any attachment to the permit which contains appropriate conditions, plans, limitations and other requirements relating to municipal lagoons, industrial surface impoundments, sludge management plans, or land application of sludge or wastewater associated with the discharging facility or activity subject to DEQ's jurisdiction and pursuant to DEQ rules and regulations.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 32 Ok Reg 977, eff 9-15-15; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-3-4. Fees

(a) **General.** Application fees are non-refundable and are due when an application is filed with DEQ.

(b) **Individual discharge permit fees.** The fees for individual discharge permits are as follows:

(1) **Application fees.** The application fee for:

(A) a new or amended individual discharge permit is $500.

(B) renewal under an existing individual discharge permit is $500.

(2) **Annual fees.** All holders of individual discharge permits shall pay an annual permit fee over the life of the permit. Payments for annual fees are due upon receipt of an invoice mailed from DEQ. Failure to pay an annual fee may result in suspension or termination of the permit. The formulas used to calculate the annual fees are in Appendices B and C.

(c) **Individual permit fees for industrial users.** The fees for individual industrial user permits are as follows:

(1) **Application fees.** The application fee for:

(A) a new or amended individual industrial user permit is $500.

(B) renewal under an existing individual industrial user permit is $500.

(2) **Annual fees.** All holders of individual industrial user permits shall pay an annual permit fee over the life of the permit. Payments for annual fees are due upon receipt of an invoice from DEQ. Failure to pay an annual fee may result in suspension or termination of the permit. The formula used to calculate the annual fee is in Appendix E.

(d) **Stormwater and other general discharge permit fees.**

(1) **Application fees.** The application fee for any new or renewal request for coverage under a stormwater or other general discharge permit is $100.

(2) **Annual fees.** All holders of an authorization to discharge pursuant to a stormwater or other general discharge permit shall pay the applicable annual fee over the life of the permit as follows:

(A) MS4 stormwater permits - $710.

(B) authorizations under a stormwater general permit - $330.

(C) authorizations under a general permit for all other discharges:

(i) for the first outfall - $480; and

(ii) for each additional outfall - $100.

(3) **Payments of annual fees for authorizations to discharge under the general construction stormwater discharge permit.** The annual fee for authorizations to discharge under the general construction stormwater permit is due at the time of the initial application and every 12 months after the effective date of the authorization until the authorization is terminated. The annual fee shall be applied to the 12-month period following the issuance of the authorization or following the due date of the annual fee.

(4) **Failure to pay annual fee.** Failure to pay the required annual fee may result in suspension or termination of the authorization.

(e) **CPI fee increase.** To assist DEQ in meeting rising costs to the permitting and enforcement activities covered by this Chapter, the fees set out in (b), (c), and (d) of this Section shall be automatically adjusted on July 1st every year to correspond to the percentage, if any, by which the Consumer Price Index (CPI) for the most recent calendar year exceeds the CPI for the previous calendar year. DEQ may round the adjusted fees up to the nearest dollar. DEQ may waive collection of an automatic increase in a given year if it

determines other revenues, including appropriated state general revenue funds, have increased sufficiently to make the funds generated by the automatic adjustment unnecessary in that year. A waiver does not affect future automatic adjustments.

(1) Any automatic fee adjustment under this subsection may be averted or eliminated, or the adjustment percentage may be modified, by rule promulgated pursuant to the Oklahoma Administrative Procedures Act. The rulemaking process may be initiated in any manner provided by law, including a petition for rulemaking pursuant to 75 O.S. ' 305 and OAC 252:4-5-3 by any person affected by the automatic fee adjustment.

(2) If the United States Department of Labor ceases to publish the CPI or revises the methodology or base years, no further automatic fee adjustments shall occur until a new automatic fee adjustment rule is promulgated pursuant to the Oklahoma Administrative Procedures Act.

(3) For purposes of this subsection, "Consumer Price Index" or "CPI" means the Consumer Price Index - All Urban Consumers (U.S. All Items, Current Series, 1982-1984=100, CUUR0000SA0) published by the United States Department of Labor. The CPI for a calendar year is the figure denoted by the Department of Labor as the "Annual" index figure for that calendar year.

(f) Fees not received within 30 days after the due date will be subject to an additional fee of ten percent (10%) of the fee set forth in the statement.

(g) If the fees have not been received by DEQ within 60 days after the due date set forth in the invoice, the authorization to discharge under the permit will be subject to revocation after notice and opportunity for hearing.

(h) State appropriations and federal grants will be used to offset the annual fee where possible.

(i) The fees shall only be raised in the manner stated in paragraph (e) above, unless a workload and budget analysis is completed, which demonstrates that an additional increase in fees is warranted.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 28 Ok Reg 1231, eff 7-1-11; Amended at 31 Ok Reg 1292, eff 9-12-14; Amended at 43 Ok Reg, Number 21, effective 9-15-26; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-3-5. Permit termination

Requests by third parties for termination may be made subject to the provisions of 40 CFR § 124.5(a). If the Executive Director determines that the request is not justified, he or she will send the requester a brief written response giving a reason for the decision. Denials of requests are not subject to public notice, comment or hearings.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-3-6. Compliance required

Applicants must comply with the terms of the permits that are issued. Permits may contain provisions more stringent than these rules in order to meet Oklahoma Water Quality Standards (OAC 252:730), the Implementation of Oklahoma's Water Quality Standards (OAC 252:740), and the Water Quality Management Plan.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 40 Ok Reg 2018, eff 9-15-23; Amended at 40 Ok Reg 241, eff 10-25-22 (emergency); Added at 21 Ok Reg 1584, eff 6-11-04]

SUBCHAPTER 5. DISCHARGE PERMIT REQUIREMENTS

252:606-5-1. Terms and conditions of permits

(a) Terms and conditions of permits issued under this Chapter will include requirements necessary to assure compliance with the Oklahoma Water Quality Standards (OAC 252:730), the Implementation of Oklahoma's Water Quality Standards (OAC 252:740), and the Water Quality Management Plan.

(b) Where applicable, DEQ may require municipalities to adopt and enforce appropriate requirements for dischargers to storm sewers to cause compliance with municipally-held stormwater discharge permits.

(c) Where practicable and as deemed appropriate by the Executive Director and as applicable in the circumstances, any discharge permit, or authorization to discharge issued by the Executive Director under a

General Permit, may contain appropriate terms, conditions, limitations and requirements related to protection of groundwater, for remediation of pollution, or for implementation of other programs under the jurisdiction of DEQ.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 40 Ok Reg 2018, eff 9-15-23; Amended at 40 Ok Reg 241, eff 10-25-22 (emergency); Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-5-2. Technology-based methodologies

Technology-based methodologies include:

(1) **Industrial permits.** Effluent limitation guidelines for industry categories and pollutants are promulgated by the EPA pursuant to the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 and Water Quality Act of 1987. EPA guidelines are adopted and incorporated by reference in 252:606-1-5. If there are no industry category or pollutant guidelines applicable to the applicant's industry, BPJ of the permit writer applies.

(2) **Municipal permits.**

(A) Technology-based limitations for municipal discharges are based upon the definition of "secondary treatment". The Oklahoma definition of "secondary treatment" is more stringent than the EPA definition under 40 CFR Part 133. Subparagraphs (B) through (G) of this paragraph contain the EPA approved definition of "secondary treatment" for the State of Oklahoma, which is used in the development of wasteload allocations in the municipal point source inventory.

(B) For facilities discharging to perennial streams, "secondary treatment" is defined as:

(i) A monthly average of 30 mg/L Biochemical Oxygen Demand - 5 day (BOD_5). A Carbonaceous Biochemical Oxygen Demand - 5 Day ($CBOD_5$) of 25 mg/L is considered to be equivalent to a BOD_5 of 30 mg/L.

(ii) A weekly average of 45 mg/L BOD_5. A $CBOD_5$ of 40 mg/L is considered to be equivalent to a BOD_5 of 45 mg/L.

(iii) The monthly average percent removal for BOD_5 or $CBOD_5$ cannot be less than 85%.

(iv) A monthly average of 30 mg/L total suspended solids (TSS).

(v) A weekly average of 45 mg/L TSS.

(vi) The monthly average percent removal for TSS cannot be less than 85%.

(vii) The pH must be maintained between the limits of 6.5 and 9.0 standard units.

(C) For discharges to intermittent streams (those with 7-day, 2-year, low flow of zero) and for any discharge to a lake as defined in this Section, secondary treatment is defined as:

(i) A monthly average of 20 mg/l BOD_5. A $CBOD_5$ of 18 mg/l is considered to be equivalent to a BOD_5 of 20 mg/L.

(ii) A weekly average of 30 mg/L BOD_5. A $CBOD_5$ of 25 mg/L is considered to be equivalent to a BOD_5 of 30 mg/L.

(iii) The monthly average percent removal for BOD_5 or $CBOD_5$ cannot be less than 85%.

(iv) A monthly average of 30 mg/L TSS.

(v) A weekly average of 45 mg/L TSS.

(vi) The monthly average percent removal for TSS cannot be less than 85%.

(vii) The pH must be maintained between the limits of 6.5 and 9.0 standard units.

(D) For discharges where treatment is solely provided by lagoons, whether the discharge is to a perennial or an intermittent stream, secondary treatment is defined as:

(i) A monthly average of 30 mg/L BOD_5. A $CBOD_5$ of 25 mg/l is considered to be equivalent to a BOD_5 of 30 mg/L.

(ii) A weekly average of 45 mg/L BOD_5. A $CBOD_5$ of 40 mg/l is considered to be equivalent to a BOD_5 of 45 mg/L.

(iii) The monthly average percent removal for BOD_5 or $CBOD_5$ cannot be less than 65%.
(iv) A monthly average of 90 mg/L TSS.
(v) A weekly average of 135 mg/L TSS.
(vi) The pH must be maintained between the limits of 6.5 and 9.0 standard units.
(vii) Subparagraph (D) does not apply to a discharge to a lake as defined in this Section.

(E) For purposes of this Section, a discharge to a lake is any discharge from a point source which is either a direct discharge into a lake, or within five river miles upstream of the conservation pool of any lake.

(F) For purposes of this Section, a lake is an impoundment of the waters of the state which exceeds 50 acre-feet in volume which:
(i) is owned or operated by a unit of government,
(ii) appears in Oklahoma's Clean Lakes Inventory, or
(iii) is a privately-owned lake which has beneficial uses similar to those of publicly-owned or operated lakes.

(G) For purposes of this Section, percent removal is a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the monthly average values of the raw wastewater influent pollutant concentrations to the facility and the monthly average values of the effluent pollutant concentrations for a given time period.

(3) **Municipal treatment greater than secondary.** In the CWA Section 208 "Water Quality Management Plan for Oklahoma," Appendix B, the only specific wasteload allocation numbers assigned are those that apply to facilities showing a need for treatment greater than secondary (e.g., 10 mg/L BOD_5, 15 mg/L TSS, and 2 mg/L NH_3-N). All other facilities receive an allocation of secondary.

(4) **Municipal secondary treatment.** In the CWA Section 208 "Water Quality Management Plan for Oklahoma," Appendix B, determination of the actual effluent limits for a facility with an allocation of secondary can be accomplished by finding the stream class (perennial or intermittent) and the current treatment process (mechanical plant or lagoon, etc.). For example, an activated sludge facility (mechanical plant) that discharges into a perennial stream will have effluent limits of 30 mg/L BOD_5 and 30 mg/L TSS as found in paragraph (2) of this Section.

(5) **Municipal bacterial limits.** The Executive Director may establish in discharge permits limitations for bacteria where:
(A) the proposed discharge is a "discharge to a lake" as defined in this Section, or
(B) the proposed discharge may otherwise adversely affect the beneficial uses of the waters of the state.

[**Source:** Amended at 32 Ok Reg 977, eff 9-15-15; Amended at 31 Ok Reg 1297, eff 9-12-14; Amended at 41 Ok Reg, Number 23, effective 9-15-24; Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-5-3. Water quality review

(a) The provisions of "Quality Criteria for Water, 1986", United States Environmental Protection Agency, EPA 440/5-86-001, as amended, are incorporated herein by reference and will be consulted where Oklahoma's Water Quality Standards do not contain a specific criterion on a particular pollutant and a criterion is necessary to protect a designated beneficial use.

(b) In all cases, where appropriate, to ensure that beneficial uses of receiving waters are protected or when deemed necessary to establish wasteload allocations of multiple dischargers along a stream segment, DEQ will require the applicant to perform and submit to DEQ, or DEQ will perform, appropriate stream studies and water quality modeling.

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-5-4. Water quality standards variance

Approval for any variance allowed pursuant to the Oklahoma Water Quality Standards must be obtained directly from DEQ.

[**Source:** Amended at 40 Ok Reg 2018, eff 9-15-23; Amended at 40 Ok Reg 241, eff 10-25-22 (emergency); Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-5-5. Stormwater discharges

(a) **Prohibited without permit.** Discharges of stormwater associated with industrial or construction activity to waters of the state are prohibited except as authorized by in an individual OPDES permit or an authorization under an Oklahoma General Stormwater permit.

(b) **Applications.** An application for an authorization to discharge under the Oklahoma General Stormwater permit shall be submitted on forms provided by DEQ and shall be delivered to DEQ:

(1) in person,

(2) by mail, or

(3) electronically, provided the electronic submission meets the requirements of OAC 252:4-17.

(c) **Maintenance of property.** All property must be maintained to prevent the discharge of stormwater runoff which would violate permit limitations or would cause a violation of Oklahoma's Water Quality Standards. Such maintenance includes containing the areas where raw and waste chemicals are stored, cleaning of trash and spills, and preventing the accumulation of wastes in discharge areas. Additional requirements will be as specified in any applicable individual or general permit and any required pollution prevention plan.

(d) **Permit conditions for regular individual permits.** In any regular individual permit authorizing the discharge of stormwater, DEQ may include as conditions and limitations any condition or limitation or other requirement set forth in the "OPDES Stormwater Multi-Sector General Permit for Industrial Activities or the Stormwater General Permit for Construction Activities."

(e) **Notice of termination.** A Notice of Termination for stormwater discharges shall be submitted on a form provided by DEQ and shall be delivered to DEQ:

(1) in person,

(2) by mail, or

(3) electronically, provided the electronic submission meets the requirements of OAC 252:4-17.

[**Source:** Amended at 28 Ok Reg 1231, eff 7-1-11; Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

SUBCHAPTER 6. POINT SOURCE DISCHARGES

[**Source:**Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-1. Quantitative effluent data in permit application

Permit applicants must submit all information required in DEQ permit application forms or requested during application review and use analytical methods listed at 40 CFR Part 136 or other EPA approved methods. Where there is no approved analytical method listed, the applicant must fully describe the method used for EPA and DEQ review and obtain approval prior to utilizing these data. All data submitted must be defensible analytical data.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-2. Measurable levels and data characterization

Measurable levels for effluent and background data shall be less than or equal to the MQLs established in Appendix H of this Chapter. Where a pollutant has an established MQL, DEQ will include a provision in the permit requiring the measurable levels be less than or equal to the MQL. Data will be characterized as follows:

(1) Where a background or effluent concentration data set reflects some measurable and some unmeasurable levels of a substance at or below the MQL, DEQ will use Robust ROS to estimate

the unmeasurable quantities. When there are fewer than three measurable data points, DEQ will use one-half of the MQL to estimate the unmeasurable quantities and not Robust ROS.
(2) If a substance is unmeasurable in all samples collected for a background or effluent concentration data set, DEQ will use a zero level.
(3) If analytical data submitted does not meet the established MQL, DEQ will allow the permit applicant to provide additional data that meets the established MQL. If the applicant does not do so, DEQ will assume the substance is present at the reported measurable level.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-3. Effluent characterization for determining reasonable potential
An effluent's C_{95} concentration is used to characterize the effluent to determine if there is reasonable potential for a substance. Permit applicants must retain all analytical laboratory reports used for effluent characterization in a permit application and provide copies to DEQ upon request. Where DMRs or facility records are used to characterize effluent DEQ will use, at a minimum, the most recent two-year period of record. When characterizing whole effluent toxicity, DEQ may use the most recent five-year period of record. Effluent monitoring data must be defensible analytical data, must be representative of the discharge, and must account for any seasonality or other variability in effluent quality. For reasonable potential determination, see OAC 252:606-6-3 through 6-9.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-4. Effluent characterization for determining reasonable potential for parameters other than temperature
Arithmetic and/or geometric means are calculated wherever there are two or more available data points. Effluent data sets comprised of at least ten data points are required to determine standard deviations.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-5. CE(mean) for effluent characterization for determining reasonable potential for parameters other than temperature
Geometric means shall be used when at least ten individual data points are available. A geometric mean shall be calculated using individual measurement values. Geometric means may not be calculated using DMR monthly averages, unless the DMR monthly average is the result of only two measurements. If fewer than ten data points are available, the arithmetic mean shall be used. Arithmetic and geometric means shall be calculated according to Equations I-1 and I-2 in Appendix I, respectively.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-6. CE(max) for effluent characterization for determining reasonable potential for parameters other than temperature
$C_{E(max)}$ for a substance is determined from the available effluent data, or is estimated by the permittee in the permit application for a new discharge.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-7. Coefficient of variation for parameters other than temperature
The CV is calculated according to Equation I-5. If fewer than ten effluent data points are available, a value of 0.6 is assumed for CV.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-8. C95 for determining reasonable potential for parameters other than temperature

(a) **Existing discharges**. If fewer than ten effluent data points are available, the C_{95} effluent concentration is determined by multiplying $C_{E(mean)}$ by 2.135 where $C_{E(mean)}$ is the arithmetic mean. If only a single effluent data point is available, it is $C_{E(mean)}$ for the purpose of determining C_{95}. Where ten or more effluent data points are available, the C_{95} concentration is calculated directly from the effluent data set according to Equation I-8.
(b) **New discharges**. For new discharges, C_{95} is estimated by multiplying the expected average effluent quality, $C_{E(mean)}$, by 2.135. Where new industrial facility discharges include cooling tower blowdown from a recirculating cooling water system, permit applicants must submit the results of at least three water samples collected from the cooling water source. The samples must be collected on different days no more than one year prior to submission of the application. The applicant must estimate the C_{95} concentration of the blowdown discharge using the source water monitoring data, based on the projected number of recirculation cycles.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-9. Effluent characterization for determining reasonable potential for effluent temperature
(a) **T_{95}**. Where there is a thermal component to a discharge, T_{95} is used to determine reasonable potential.
(b) **Existing discharges**. If a daily maximum effluent temperature distribution is available, then DEQ will determine T_{95} directly from the untransformed data distribution. If the temperature distribution is unknown, the highest daily maximum effluent temperature is used for T_{95}. A temperature CV of 0.6 is assumed unless the temperature CV is determined from the effluent temperature distribution.
(c) **New discharges**. Permit applicants for new facilities or new discharges at existing facilities must estimate T_{95} through engineering calculations.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-10. Receiving water background characterization
Where available, DEQ will include upstream background levels of substances in assessing the reasonable potential evaluation and in calculating wasteload allocations. For background characterizations, see OAC 252:606-6-10 through 6-16.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-11. Receiving water background characterization requirements
(a) **Long-term average**. Where required, DEQ will calculate a LTA background level of a substance as a geometric mean unless otherwise specified.
(b) **Background data sources**. Background data must be defensible analytical data and be representative of the receiving water's current upstream conditions. DEQ will use data collected and reported in accordance with a background monitoring requirement in a previous permit where available.
(c) **Unavailability of background data**. Where no background data is available, the background is assumed to be zero.
(d) **Size of background data set**. At least ten data points are required for a background data set to be considered complete. DEQ may use a partial background data set for reasonable potential purposes if the data is the only defensible analytical data available. Where the use of a partial background data set results in demonstration of reasonable potential, the permit will include effluent limitations based on a zero background level, which may have a delayed effective date of no more than two years. The permit will require the permittee to complete the background monitoring, at which time DEQ will reopen the permit, if necessary, to adjust permit limitations according to the background level determined from a complete background data set.
(e) **Alternative Method for Determination of 7Q2**.

(1) A permittee may use an alternative method for determining a 7Q2 as allowed by OAC 252:740-1-6(c). The 7Q2 calculated from the historical record may be modified to incorporate anticipated upstream flow releases provided the source of water is owned or controlled by a federal governmental entity and the following information is submitted to DEQ:

(A) a determination that a reliable source of upstream flow exists;

(B) documentation that the upstream source of water:

(i) includes water quality improvement as an authorized use, or

(ii) includes allocated storage for water quality improvement;

(C) documentation that the upstream source of water is governed by a water control plan developed and implemented pursuant to 33 CFR § 222.5; and

(D) a demonstration that the alternative 7Q2 is identified in the most recently published State Water Quality Management Plan.

(2) DEQ will include any approved alternative 7Q2 as a permit limit in any discharge permit. Said limit shall be stated as a minimum daily flow measured at the nearest upstream flow gage.

(3) In the event that the alternative 7Q2 is not consistently attained, DEQ may re-open the permit and re-calculate the effluent limitations using the actual receiving stream flows.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-12. Background monitoring and frequency

When effluent limits have not been established and a complete background data set that meets the requirements of OAC 252:606-6-11 is not available, the appropriate BT/C equation in Appendix P shall be used to determine whether background monitoring is required. If the BT/C ratio is less than or equal to the $(BT/C)_{max}$ value using the appropriate equation in Appendix P, background monitoring is required and the monitoring frequency must be sufficient to provide at least ten data points over a period of one year. The collected background data shall be used in conjunction with the effluent data to determine if there is reasonable potential for the effluent to violate water quality standards.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-13. Background monitoring location

(a) **Streams**. The permittee must collect background samples at a point away from the stream bank, as close as is feasible to the channel, immediately upstream of the point of discharge, but not affected by it.

(b) **Lakes**. The permittee must collect background samples at a point away from the water's edge and outside the regulatory mixing zone.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-14. Requirements specific to numeric criteria for toxic substances for the Fish and Wildlife Propagation beneficial use

(a) **Background assumed zero**. DEQ will assume zero background levels for direct discharges of once through cooling water.

(b) **Hardness or pH dependent criteria**. Where a criterion for a pollutant is hardness or pH-dependent, DEQ will add hardness or pH monitoring, as appropriate, to the background monitoring requirements.

(c) **Representative of low flow conditions in streams**. The permittee shall collect background samples as close to low flow conditions as possible in streams.

(d) **Background data from a previous permit**. DEQ will not use background data referenced in the previous permit unless the data is defensible analytical data.

(e) **Background monitoring**. Where toxicity-based effluent limitations for a substance are established in a permit and a complete background data set meeting the requirements of OAC 252:606-6-11 is not available, background monitoring of the limited substance is required. This requirement does not apply where the background shall be considered equal to zero in accordance with OAC 252:606-6-14(a), where $Q^* \geq 0.333$, or where the regulatory low flow of the receiving stream is assumed to be 1 cfs.

[**Source:** Amended at 43 Ok Reg, Number 21, effective 9-15-26; Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-15. Requirements specific to human health criteria
Where available, DEQ will use background data representative of the LTA upstream concentration. Where human health-based or raw water column-based effluent limitations for a substance are established in a permit based on a zero background assumption, background monitoring of the limited substance is required.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-16. Requirements specific to agriculture criteria
(a) **Historical data**. If defensible site-specific background analytical data is not available, DEQ will use the YMS and SS criteria in OAC 252:730, Appendix F, to determine the background concentrations of the mineral constituents. In the absence of listed YMS and SS criteria specific to the receiving water of interest, the segment averaged YMS and SS criteria are used to establish the background concentrations of the mineral constituents. CB is calculated according to Equation I-11in Appendix I.
(b) **Site-specific background data available**. Where a site-specific background data set of at least ten data points is available, DEQ may use the arithmetic average of the site-specific background data set instead of a background level determined from the segment-averaged YMS and SS values in OAC 252:730, Appendix F.
(c) **Background monitoring**. Where agriculture criteria-based limitations are established in a permit, DEQ may require background monitoring of the limited mineral constituent(s) to determine site-specific conditions.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-17. Implementation of narrative toxicity criterion for the Fish and Wildlife Propagation beneficial use using whole effluent toxicity
For implementation of the narrative criterion, see OAC 252:606-6-17 through 6-43.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-18. Reasonable potential to exceed narrative toxicity criterion for the Fish and Wildlife Propagation beneficial use utilizing whole effluent toxicity
See OAC 252:740.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-19. TREs, TIEs and WET limits
(a) **TRE and TIE**. A TRE is required when persistent toxicity is demonstrated. When intermittent toxicity is demonstrated DEQ may require a TRE/TIE.
(b) **WET limits**. DEQ shall incorporate a WET limit into a permit for the species affected by whole effluent toxicity upon the completion of a TRE/TIE, unless DEQ determines that chemical-specific effluent limits or toxicity-specific management practices in accordance with OAC 252:606-6-27 are sufficient to comply with the narrative toxicity criterion and protect the designated use. DEQ may also incorporate a WET limit or chemical-specific effluent limits into a permit when reasonable potential is established.
(c) **Effective date of WET limit**. The effective date of a WET limit or a chemical-specific limit may be deferred up to three years from the date of completion of the TRE/TIE or the effective date of a permit, as applicable. The effective date of toxicity-specific management practices may be deferred up to one year from the date of completion of the TRE/TIE or the effective date of a permit, as applicable.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-20. Implementation of narrative toxicity criterion for ammonia

DEQ will use the interim strategy described in OAC 252:606-6-20 through 6-26 for implementation of the narrative toxicity criterion for ammonia for major municipalities which have DO-based WLAs for ammonia and for major industries which produce ammonia as a commercial product or as a by-product of their industrial processes, or which have technology-based ammonia limits or DO-based ammonia WLAs.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-21. Reasonable potential for ammonia
See OAC 252:740.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-22. Toxicity-based permit limit development for ammonia
Toxicity-based permit limitations are determined using the chronic screening value of 6 mg/L, a CV of 0.6, a zero background concentration (unless known to be otherwise), the regulatory flows described at OAC 252:606-6-52, and chronic mixing zone equations described at OAC 252:606-6-55 through 6-57. The toxicity-based MAL is based on a monitoring frequency of 3/week.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-23. Comparison of toxicity-based limitations with other ammonia limitations
The most stringent MAL for a given season determines the final permit limits. DMLs or WALs follow the type of MAL established in the permit.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-24. Effective date of toxicity-based ammonia limits
Effective dates for toxicity-based ammonia limits may be deferred up to three years with an approved schedule for compliance if DEQ determines that a facility is unable to comply with the limit through proper operation and maintenance of the existing treatment works.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-25. Concurrent ammonia, pH and WET testing
Permits will require the permittee to measure both ammonia and pH levels on all samples collected for WET testing of fathead minnow species. This applies only to facilities described in OAC 252:606-6-20. Permits may include a reopener clause for the purpose of increasing or decreasing ammonia limits if warranted.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-26. Monitoring frequencies for ammonia
Where ammonia limits are toxicity-based, permits will require the permittee to monitor ammonia at a frequency of three times per week. At any time during the term of a permit, where the permittee has completed 12 consecutive reporting periods subject to toxicity based ammonia limits where the highest daily maximum concentration did not exceed 1.5 times the toxicity based MAL and there were not exceedances of the monthly average or daily maximum limits for ammonia, the permittee may request a reduction of the ammonia monitoring frequency to one time per week. If WET test failures attributable to ammonia are experienced at any time during the term of a permit, or there are exceedances of the monthly average limit or daily maximum limit for ammonia, the ammonia monitoring frequency must be continued at or be returned to three times per week. If there are no WET test failures attributable to ammonia and no exceedances of either the monthly average limit or the daily maximum limit for ammonia following a reduction of the monitoring frequency for toxicity-based ammonia limits to one time per week, the reduced

ammonia monitoring frequency may be continued in the ensuing permit cycle. This paragraph does not apply to ammonia monitoring required to be performed concurrently with WET testing.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-27. Intermittent toxicity

Where the permittee has demonstrated intermittent toxicity in either acute or chronic WET testing, DEQ will require an increase in the frequency of WET testing and may require the permittee to perform a TRE/TIE for the affected species. A WET limit, chemical-specific numerical limit, or toxicity-specific management practice may be required at the completion of a TRE/TIE if DEQ determines it is warranted.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-28. Toxicity from halogens

Toxicity from halogens (chlorine, bromine, and bromo-chloro compounds) will be controlled by dehalogenation and chemical-specific limits. The dehalogenation requirement is implemented as "no measurable amount" in an effluent, less than 0.1 mg/L for halogenated oxidants. Where halogenated oxidants other than or in addition to chlorine are used, the permit limitation will be expressed as TRO rather than TRC. Permits will reference the approved 40 CFR Part 136 analytical method for TRC when expressing permit limitations in terms of TRO.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-29. WET testing methods

The specific tests and test organisms used for determining whole effluent toxicity include:

(1) **Acute test/*D. pulex***. Acute 48-hour static renewal toxicity test using *Daphia pulex* (Method 2021.0) as described in EPA publication no. 821-R-02-012 (October 2002), Fifth Edition, Methods for Measuring the Acute Toxicity of Effluent to Freshwater and Marine Organisms.

(2) **Acute test/*P. promelas***. Acute 48-hour static renewal toxicity test using *Pimephales promelas* (Method 2000.0) as described in EPA publication no. 821-R-02-012 (October 2002), Fifth Editon, Methods for Measuring the Acute Toxicity of Effluent to Freshwater and Marine Organisms.

(3) **Chronic test/*C. dubia***. Chronic 7-day static renewal survival and reproduction test using *Ceriodaphnia dubia* (Method 1002.0), as described in EPA publication no. 821-R-02-013 (October 2002), Fourth Edition, Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.

(4) **Chronic test/*P. promelas***. Chronic 7-day static renewal larval survival and growth test using *Pimephales promelas* (fathead minnow) (Method 1000.0), as described in EPA publication no. 821-R-02-013 (October 2002), Fourth Edition, Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.

(5) **Acute test/*D. Magna***. Acute 48-hour static renewal toxicity test using *Daphnia magna* (Method 2021.0), as described in EPA Publication No. 821-R-02-012 (October, 2002), fifth edition, Methods for Measuring the Acute Toxicity of Effluent to Freshwater and Marine Organisms.

(6) **Chronic test/*D. Magna***. Chronic 21-day static renewal life-cycle toxicity test using *Daphnia magna*, (ASTM Designation E-1193), as described in ASTM Publication E-1193-97 (Reapproved 2004), Standard Guide for Conducting Daphnia Magna Life Cycle Toxicity Tests.

(7) **Acute test/Mussels**. Acute toxicity test using mussels (ASTM Designation E-2455) as described in ASTM Publication E-2455-06 (Approved April 2006), Standard Guide for Conducting Laboratory Toxicity Test with Freshwater Mussels.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-30. Concurrent chemical-specific sampling and analysis

DEQ may require concurrent chemical-specific analyses on samples collected for WET testing purposes where there is reason to believe substances may cause or contribute to whole effluent toxicity. Permittees

must submit the results of concurrent chemical-specific testing with the WET test report. Permittees must collect sufficient sample volumes for the testing laboratory to perform concurrent chemical-specific testing in addition to the WET testing.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-31. WET test requirements

WET testing is required for all major dischargers and those minor dischargers identified by DEQ as posing a significant unaddressed toxic risk. Q* is calculated as described in Appendix J.

(1) The following requirements apply to all WET testing:

(A) **Acute testing only**. Acute testing only is required for all discharges to lakes and to streams where Q* < 0.054.

(B) **Chronic testing only**. Chronic testing only is required where Q* > 0.3333.

(C) **Acute and chronic testing, except for *Daphnia Magna***. Both acute and chronic testing are required where 0.054 ≤Q* ≤ 0.3333.

(2) **Acute and/or chronic testing using *Daphnia magna***. Acute and/or chronic testing using Daphnia magna may substitute for acute and/or chronic testing for *Daphnia pulex* or *Ceriodaphnia dubia* in the following circumstances:

(A) acute testing using *Daphnia magna* for streams where the instream concentration of TDS is less than or equal to 1000 mg/L after mixing using the regulatory low flow, may be considered by DEQ on a case-by-case basis where the TDS level in an effluent has been demonstrated to cause WET test failures to *Daphnia pulex*.

(B) acute testing using *Daphnia magna* for streams where the instream concentration of TDS is greater than 1000 mg/L after mixing using the regulatory low flow, may be considered on a case-by-case basis where the TDS level in an effluent has been demonstrated to cause WET test failures to *Daphnia pulex* and the background TDS level of the receiving stream causes toxicity to *Daphnia pulex* in a control dilution (0% effluent).

(C) chronic testing using *Daphnia magna* may be considered by DEQ on a case-by-case basis where the TDS level in the effluent has demonstrated WET test failures to *Ceriodaphnia dubia*, where the background TDS levels of the receiving stream causes toxicity to *Ceriodaphnia dubia*, in a control dilution (0% effluent), and where the permittee can demonstrate that the ionic ratios in the effluent are similar to the ionic ratios in the receiving stream.

(3) **Mussels**. Acute and/or chronic testing of mussels shall be required if DEQ determines that the discharge may affect an indigenous population(s) of mussels.

[**Source:** Amended at 43 Ok Reg, Number 21, effective 9-15-26; Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-32. Test failure notification and retesting

Permittees shall notify DEQ by telephone within 24-hours and in writing within five days of becoming aware of a WET test failure and shall perform WET tests/retests on the affected test species. WET tests/retests are required as follows:

(1) **WET limits**. If a permit contains a WET limit, monthly WET tests of the same type as the failed test are required.

(A) If the permittee achieves three consecutive passing tests, the permittee may return to its routine WET testing frequency.

(B) If three consecutive passing tests cannot be achieved in six months, DEQ may require further action, including the possibility of a TIE or a TRE.

(C) If a TIE or a TRE is required or the permittee is in the process of implementing toxicity reduction measures that have resulted from a completed TRE related to the type of failure in question, the permittee may return to its routine WET testing frequency.

(2) **Biomonitoring**. If a permit does not contain a WET limit, two monthly WET retests of the same type as the failed test are required during the two-month period following the month in which the test failure is experienced.

(A) Retests are not required if the permittee is:
(i) actively engaged in conducting a TRE, or
(ii) in the process of implementing toxicity reduction measures that:
(I) have resulted from a completed TRE related to the type of failure in question, and
(II) are reflected in a DEQ-issued compliance schedule.
(B) It is the responsibility of the permittee to request an exemption from retesting and provide a basis for the request within 30 days of the completion of the failed test.
(C) Retests cannot be substituted for regularly scheduled WET tests.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-33. WET testing dilution series
All WET testing will utilize a 0.75 dilution series as described in Tables J-1 and J-2.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-34. Test duration for WET tests
The appropriate WET test duration is specified in the specific test method pursuant to OAC 252:606-6-29.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-35. Critical dilution for WET tests
The following applies for dilutions for WET tests:
(1) **Acute testing**. The ACD is 100%.
(2) **Chronic testing**. The CCD is calculated according to Equation J-1, J-2, or J-3, depending on the value of Q*.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-36. Dilution water for discharges to intermittent streams
For discharges to intermittent streams where there is no receiving water available when the sample is collected, permittees must use synthetic dilution water having a pH, hardness, and alkalinity similar to that of the closest downstream perennial water.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-37. WET test dilution water for discharges to perennial streams and lakes
For discharges to perennial streams or lakes, permittees must use receiving water collected as close to the point of discharge as possible but unaffected by the discharge. Receiving water must be collected outside the regulatory mixing zone for discharges to lakes. If the receiving water control fails to fulfill the test acceptability criteria in OAC 252:606-6-38, the permittee must substitute synthetic dilution water for the receiving water in all subsequent tests, provided:
(1) a synthetic dilution water control which fulfills the test acceptability requirements in OAC 252:606-6-38 was run concurrently with the receiving water control.
(2) the test indicating receiving water toxicity was carried out to completion.
(3) the synthetic dilution water had a pH, hardness and alkalinity similar to that of the receiving water, provided the magnitude of these three parameters did not cause toxicity in the synthetic dilution water.
(4) the receiving water test must be conducted at the start of each permitting cycle.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-38. Test acceptability

Test acceptability requirements will be specified in the permit. If a WET test does not meet all of the acceptability requirements of the test method plus those specified in the permit, the permittee must conduct a repeat test for the affected test species within the required reporting period.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-39. Endpoint and test failure criteria for acute tests

The endpoint for routine acute WET testing and retesting is the LC_{50}. Acute test failure is greater than or equal to 50% mortality to a test species, as specified in OAC 252:606-6-29. Statistical analysis must be consistent with the methods described in the documents referenced in OAC 252:606-6-29. Where a WET limit is established, it is expressed as an LC_{50} effluent concentration and must be greater than 100% (>100%).

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-40. Endpoint and test failure criteria for chronic tests

The endpoint for lethality for chronic WET testing and retesting is the $NOEC_L$. The endpoint for sublethality for routine chronic WET testing and retesting is the $NOEC_S$. Statistical analysis must be consistent with the methods described in the documents referenced in OAC 252:606-6-29. For chronic test failure, see OAC 252:730.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-41. WET testing frequency and trial period

(a) The frequency of WET testing is once per quarter. Monitoring frequency reductions will not be granted during the first five years in which WET testing is required.
(b) Monitoring frequency reductions may be granted in a second or subsequent permit renewal in accordance with OAC 252:606-6-42 after completion of a specified trial period. The minimum WET testing trial period is one year. The length of the WET testing trial period will be specified in the second or subsequent permit and will be established by DEQ based on whether and the degree to which a facility poses an increased toxicity risk due to the nature of its activities (e.g., accepting external waste streams, a history of WET test failures, or reported discharges of toxic compounds in toxic amounts).
(c) If DEQ determines that an increased toxicity risk so warrants, quarterly or more frequent testing may be required for the life of the permit.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-42. WET testing frequency reductions after WET testing trial period

Permittees may request reduction of the WET testing frequency for the remaining term of the permit depending on the results of WET testing during the WET testing trial period. Any reduction will be considered on a test species-specific basis. To qualify for a WET testing frequency reduction, the permittee shall certify that tests submitted in fulfillment of its WET testing requirements during the WET testing trial period meet all test acceptability criteria set forth in OAC 252:606-6-38 and EPA WET test method documents. In addition, the following apply:

(1) WET testing established in permit. Reductions in WET testing frequency are not allowed during the first five years of the applicability of WET testing. DEQ may consider a reduced testing frequency when the permit is renewed, and after completion of a trial period.
(2) No test failure for a species during WET testing trial period. DEQ may reduce the testing frequency for a species to not less than once per six months. If the monitoring frequency reduction is denied, the permittee shall continue WET testing at a frequency of once per quarter for the affected species for the remaining life of the permit.
(A) To be eligible, the permittee shall:

(i) demonstrate no lethal or sublethal test failures for the applicable test species during the WET testing trial period; and

(ii) certify in writing to DEQ that it has fulfilled the test acceptability requirements set forth in OAC 252:606-6-38;

(B) DEQ will either approve or deny the certification in writing within 90 days of receipt. DEQ may deny the certification based on facility specific criteria if it finds that any of the permittee's WET test reports during the period for which certification is submitted:

(i) are substantively incomplete;

(ii) are in error regarding test acceptability criteria or statistical interpretation of results; or

(iii) were not received by DEQ by the due date prescribed in the permit.

(3) Test failure for a species demonstrated during the WET testing trial period. If a lethal or sublethal test failure is demonstrated at any time during the WET testing trial period, the permittee shall continue testing at a frequency of once per quarter for the affected species for the remaining life of the permit.

(4) WET limits established in permit. When WET limit is established in a permit frequency reduction is not allowed.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-43. Concurrent acute and chronic WET testing

The following applies to concurrent acute and chronic WET testing:

(1) General. The requirements in OAC 252:606-6-29 through 252:606-6-42 apply.

(2) Retests. Retests required as a result of acute test failure only are not required to include chronic retesting. Similarly, retests required as a result of chronic test failure only are not required to include acute retesting.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-44. Implementation of temperature criteria to protect the Fish and Wildlife Propagation beneficial use

For implementation of the temperature criterion, see OAC 252:606-6-44 through 6-50. This criterion applies to facilities which have a thermal component to their discharge.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-45. Effluent regulatory flows for the implementation of temperature criteria to protect the Fish and Wildlife Propagation beneficial use

The following effluent regulatory flows apply for the implementation of the temperature criterion to protect the Fish and Wildlife Propagation beneficial use:

(1) **Industrial**. For industries, $Q_{e(30)}$ is used.

(2) **Municipal**. For municipalities treating industrial wastewater having a thermal component, $Q_{e(D)}$ is used.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-46. Q* ratio for the implementation of temperature criteria to protect the Fish and Wildlife Propagation beneficial use

The following applies to the determination of Q*:

(1) **Streams**. The following apply to streams:

(A) **Industrial effluent**. Q* is the ratio of $Q_{e(30)}$ to $Q_{u(7Q2)}$.

(B) **Municipal effluent**. For municipalities treating industrial wastewater with a thermal component, Q* is the ratio of $Q_{e(D)}$ to $Q_{u(7Q2)}$.

(2) **Lakes**. Q* is not applicable to lakes.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-47. Reasonable potential to exceed temperature criterion for the implementation of temperature criteria to protect the Fish and Wildlife Propagation beneficial use
See OAC 252:740.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-48. WLAT
If reasonable potential is demonstrated, WLA_T is required.

(1) **Streams**. Except for streams designated as trout fisheries, Equation K-1, K-2, or K-3 is used to determine WLA_T, depending on the value of Q*. WLA_T for trout fisheries is 20°C.

(2) **Lakes.** Depending on whether the discharge conveyance is a pipe or canal, Equation K-4 or K-5 is used to determine WLA_T.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-49. LTAT
LTA_T is calculated using a 50% probability basis according to Equation K-6. A CV value of 0.6 is assumed unless a CV was determined from effluent data in accordance with OAC 252:606-6-9(b).

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-50. Development of permit limitations for the implementation of temperature criteria to protect the Fish and Wildlife Propagation beneficial use
MAL_T and WAL_T are calculated according to Equations K-7 and 8, respectively. If either the calculated MAL_T or calculated WAL_T exceeds 52°C, it is capped at 52°C. A DML_T of 52°C is required if T_{95}, the calculated MAL_T or the calculated WAL_T exceeds 52°C.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-51. Implementation of numerical criteria for toxic substances to protect the Fish and Wildlife Propagation beneficial use
Aquatic toxicity numerical criteria apply to all discharges. For implementation, see OAC 252:606-6-51 through 6-57.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-52. Effluent regulatory flows for the implementation of numerical criteria for toxic substances to protect the Fish and Wildlife Propagation beneficial use
The following effluent regulatory flows apply for the implementation of numerical toxicity criteria for toxic substances to protect the Fish and Wildlife Propagation beneficial use:

(1) **Industrial**. For industrial facilities, $Q_{e(30)}$ is used as the regulatory effluent flow.

(2) **Municipal**. The treatment facility's design flow $Q_{e(D)}$ is used as the regulatory effluent flow. The design flow used for permitting purposes shall not exceed the approved design flow in the WQMP.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 43 Ok Reg, Number 21, effective 9-15-26]

252:606-6-53. Q* ratio for the implementation of numerical criteria for toxic substances to protect the Fish and Wildlife Propagation beneficial use

Use the following to determine Q* ratio for all toxic substances, unless otherwise specified in this Section:

(1) The following are used to determine Q* ratios in streams:

(A) **Industrial effluent**. Q* is the ratio of $Q_{e(30)}$ to $Q_{u(7Q2)}$.

(B) **Municipal effluent**. Q* is the ratio of $Q_{e(D)}$ to $Q_{u(7Q2)}$.

(2) Q* is not applicable to lakes.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 43 Ok Reg, Number 21, effective 9-15-26]

252:606-6-54. Reasonable potential determination for the implementation of numerical criteria for toxic substances to protect the Fish and Wildlife Propagation beneficial use

$C_{d(A)}$ and $C_{d(C)}$ are calculated for each applicable criterion where a pollutant is present at measurable levels in the effluent or where an analytical detection level greater than the established MQL has been utilized. Also see OAC 252:740.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-55. Wasteload allocations for the implementation of numerical criteria for toxic substances to protect the Fish and Wildlife Propagation beneficial use

If a pollutant exhibits reasonable potential to exceed WQS, a water quality-based permit limit is required for that pollutant. Background levels used in calculating WLA_A and WLA_C are described in OAC 252:606-6-11 through 14. If a pollutant's background level alone exceeds a criterion, the WLA is set equal to that criterion.

(1) **Streams**. The following applies to streams:

(A) **WLA_A**. Where Q_e is expressed in cfs, Equation L-1 is used to determine WLA_A. Where Q_e is expressed in MGD, Equation L-2 is used.

(B) **WLA_C**. Depending on the value of Q*, Equation L-3, L-4, or L-5 is used to determine WLA_C.

(2) **Lakes**. Depending on whether the discharge conveyance is a pipe or canal, Equation L-6 or L-7 is used to determine WLA_C, or WLA_A, if an acute criterion applies, in the absence of a chronic criterion.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 43 Ok Reg, Number 21, effective 9-15-26]

252:606-6-56. Criteria long-term averages for the implementation of numerical criteria for toxic substances to protect the Fish and Wildlife Propagation beneficial use

LTA_A and LTA_C are calculated using a 99% probability basis according to Equations L-8 and L-9, respectively. A CV of 0.6 is assumed unless a CV is determined from effluent data in accordance with 252:606-6-7. LTA_{TOX} is the more limiting of these two LTAs.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-57. Development of permit limitations for the implementation of numerical criteria for toxic substances to protect the Fish and Wildlife Propagation beneficial use

MAL_{TOX} and DML_{TOX} are calculated from LTA_{TOX}. MAL_{TOX} is compared with all applicable criterion MALs. The most stringent MAL and associated DML is used in the permit.

(1) **MAL_{TOX}**. MAL_{TOX} is calculated using a 95% probability basis according to Equation L-10.

(2) **DML_{TOX}**. DML_{TOX} is calculated using a 99% probability basis according to Equation L-11.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-58. Implementation of dissolved oxygen criteria to protect the Fish and Wildlife Propagation beneficial use

Implementation of DO criteria is accomplished through the use of water quality modeling. Modeling of DO is a mathematical representation of the processes that occur within the system that affect instream DO concentration. For implementation of DO criteria, see OAC 252:606-6-58 through 6-63.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-59. Effluent characterization for the implementation of dissolved oxygen criteria to protect the Fish and Wildlife Propagation beneficial use

(a) **Flow**. For industrial facilities, $Q_{e(30)}$ is used as the regulatory effluent flow. For municipal facilities, the design flow $Q_{e(D)}$ is used as the regulatory effluent flow. The regulatory effluent flow used for permitting purposes will not exceed the approved design flow in the WQMP for municipal facilities or the approved critical effluent flow in the WQMP for industrial facilities. For modeling purposes, a projected effluent flow justified by engineering calculations may be utilized.

(b) **Temperature**. The seasonal temperatures specified in the WQS will be used to model point source effluent temperature unless discharge-specific data is available. If at least one year of average daily effluent temperature values is available, the upper 90th percentile value calculated from the dataset for the season will be used.

(c) **Water quality constituents**. For steady-state models, water quality constituents will be modeled at average values. For dynamic models, values will be established on a case by case basis.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-60. Receiving water characterization for the implementation of dissolved oxygen criteria to protect the Fish and Wildlife Propagation beneficial use

DO modeling will be performed under conditions that are most critical with respect to processes that determine instream concentration of DO as outlined below.

(1) **Flow**. Background flow for models shall be set at the higher of the seven-day, two-year low flow for the study area or 1 cfs. When a daily flow record of ten years or more exists, a seasonal 7Q2 may be calculated and applied for streams designated as HLAC or WWAC. Also see OAC 252:740.

(2) **Temperature**. The seasonal regulatory temperatures specified in the WQS shall be modeled as background conditions unless site-specific data is available. If at least one year of average daily stream temperature values is available, the upper 90th percentile value calculated from the dataset for the season will be used.

(3) **Water quality constituents**. Where available, the long-term average of measured values will be used to establish receiving water conditions. For seasonal analyses, values calculated from the dataset for the season shall be used. For simple models, assumed conditions estimated from similar streams in the area may be used.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-61. Reasonable potential determination for the implementation of dissolved oxygen criteria to protect the Fish and Wildlife Propagation beneficial use

See OAC 252:740.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-62. Modeling procedures for the implementation of dissolved oxygen criteria to protect the Fish and Wildlife Propagation beneficial use

Additional technical guidance for modeling procedures may be found in the CPP.

(1) **Model types**. Many types of water quality models for DO are available. Professional judgment is exercised to determine the appropriate modeling strategy for a particular situation. A simple model should only be used for small, non-complex systems with discharge flows under 1.0 MGD or as an initial screening tool for larger systems. A complex model requires a large amount of field data and should be calibrated and/or verified with observed conditions and then used to make predictive decisions. Complex models are appropriate for complex systems, multiple discharges, or large systems involving point source discharges of 1.0 MGD or more.

(2) **Target DO concentrations**. Some of the DO criteria in the WQS are minimum values while others allow for a 1.0 mg/L excursion from the criterion for up to eight hours during any 24-hour period. Dynamic models can predict these time-dependent conditions and the WQS criteria may be used directly. Since steady state water quality models cannot represent such a time-based excursion, appropriate average DO target values are used to protect the minimum DO criteria. See OAC 252:730 Appendix G for target DO concentrations. A target average DO concentration of 2.0 mg/L will be utilized to prevent nuisance conditions.

(3) **Margin of safety**. To compensate for uncertainty, a margin of safety is required for all models. The CPP provides guidance for recommended margins of safety for various types of models. As model complexity and use of actual data increase, the recommended margin of safety decreases. The margin of safety is determined by comparing the unallocated load to the maximum assimilative capacity of the system as predicted by the water quality model.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-63. Development of permit limitations for the implementation of dissolved oxygen criteria to protect the Fish and Wildlife Propagation beneficial use

Steady state models simulate average conditions. The output from a steady state model will be implemented as the monthly average permit limit for oxygen-demanding substances. Dynamic models may be used to determine both short-term and long-term average limitations directly. Permit limitations that do not require advanced levels of treatment may be expressed as BOD_5 and ammonia. Permit limitations that represent advanced levels of treatment may be expressed as $CBOD_5$ and ammonia. Ammonia limitations necessary to protect the DO criteria will be evaluated for toxicity in accordance with OAC 252:6-6-20.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-64. Implementation of human health criteria for toxic substances to protect the Fish Consumption beneficial use

For the implementation of human health criteria for toxic substances, see OAC 252:606-6-64 through 6-70. These criteria only apply to receiving waters not designated as HLAC in Appendix A of OAC 252:730.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-65. Effluent regulatory flows for the implementation of human health criteria for toxic substances to protect the Fish Consumption beneficial use

Use the following effluent regulatory flows:

(1) **Industrial**. For industrial facilities, $Q_{(30)}$ is used as the effluent regulatory flow.

(2) **Municipal**. $Q_{e(D)}$ is used as the regulatory effluent flow.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-66. Q* ratio for the implementation of human health criteria for toxic substances to protect the Fish Consumption beneficial use

The following Q* is used:

(1) **Industrial effluent**. Q* is the ratio of $Q_{e(LTA)}$ to $Q_{u(LTA)}$.

(2) **Municipal effluent**. Q* is the ratio of $Q_{e(D)}$ to $Q_{u(LTA)}$.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-67. Reasonable potential determinations in the implementation of human health criteria for toxic substances to protect the Fish Consumption beneficial use

Where a pollutant is present at measurable levels in an effluent or where an analytical detection level greater than the established MQL has been utilized, $C_{d(FF)}$ and $C_{d(NRWQC)}$ are calculated. Also see OAC 252:740.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-68. Wasteload allocations for the implementation of human health criteria for toxic substances to protect the Fish Consumption beneficial use

If $C_{d(FF)}$ exceeds C_{FF} a water quality-based permit limit is required for that substance. Background levels used in calculating WLA_{FF} are described in OAC 252:606-6-10 through 6-13 and 6-15. If a pollutant's background level exceeds C_{FF}, WLA_{FF} is set equal to C_{FF}. Equation M-1 is used to calculate WLA_{FF}. For discharges to a stream located less than five stream miles upstream of a public water supply intake and for discharges to a lake located within one mile of a public water supply intake, WLA_{FF} is set equal to C_{FF} for any pollutant detected in the discharge. Where $C_{d(NRWQC)}$ exceeds C_{NRWQC}, and there is no applicable state criterion for the substance, effluent monitoring sufficient to provide at least 10 data points over a three month to one year period is required in the permit rather than effluent limitations.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-69. Criterion long term average for the implementation of human health criteria for toxic substances to protect the Fish Consumption beneficial use

See Equation M-4.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-70. Development of permit limitations for the implementation of human health criteria for toxic substances to protect the Fish Consumption beneficial use

MAL_{FF} and DML_{FF} are calculated from LTA_{FF}. MAL_{FF} is compared with all other applicable criterion MALs. The most stringent MAL and associated DML is included in the permit.

(1) **MAL_{FF}**. MAL_{FF} equals LTA_{FF} in accordance with Equation M-7.

(2) **DML_{FF}**. The DML_{FF} is determined on a 99% probability basis according to Equation M-8.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-71. Implementation of human health and raw water criteria for toxic substances to protect the Public and Private Water Supply beneficial use

For the implementation of human health and raw water criteria for toxic substances, see OAC 252:606-6-71 through 77. These criteria only apply to receiving waters designated in Appendix A of OAC 252:730 with the Public and Private Water Supply beneficial use.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-72. Effluent regulatory flows for the implementation of human health and raw water criteria for toxic substances to protect the Public and Private Water Supply beneficial use

The following effluent regulatory flows are used:

(1) **Industrial**. $Q_{(30)}$ is used as the regulatory effluent flow for the human health/fish flesh and water criterion and the raw water criterion.
(2) **Municipal**. $Q_{e(D)}$ is used as the regulatory effluent flow.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-73. Q* ratio for the implementation of human health and raw water criteria for toxic substances to protect the Public and Private Water Supply beneficial use
Use the following to determine Q* ratio:
(1) **Industrial effluent**. For industrial effluent:
(A) **Fish flesh and water criterion**. Q* is the ratio of $Q_{e(LTA)}$ to $Q_{u(LTA)}$.
(B) **Raw water criterion**. Q* is the ratio of $Q_{e(30)}$ to $Q_{u(LTA)}$.
(2) **Municipal effluent**. Q* is the ratio of $Q_{e(D)}$ to $Q_{u(LTA)}$.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-74. Reasonable potential determination for the implementation of human health and raw water criteria for toxic substances to protect the Public and Private Water Supply beneficial use
Where a pollutant is present at measurable levels in an effluent or where an analytical detection level greater than the established MQL has been utilized, $C_{d(FFW)}$ and $C_{d(RAW)}$ are calculated. Also see OAC 252:740.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-75. Wasteload allocations for implementation of human health and raw water criteria for toxic substances to protect the Public and Private Water Supply beneficial use
If either $C_{d(FFW)}$ or $C_{d(RAW)}$ exceeds its associated criterion, a water quality-based permit limit is required for that substance. Background levels used in calculating WLA_{FFW} and WLA_{RAW} are described in OAC 252:606-6-10 through 6-13 and 6-15. If a pollutant's background level exceeds either C_{FFW} or C_{RAW}, the affected WLA is set equal to that criterion. Equations M-2 and M-3 are used to calculate WLA_{FFW} and WLA_{RAW}, respectively. For discharges to a stream located less than five stream miles upstream of a public water supply intake and for discharges to a lake located within one mile of a public water supply intake, WLA_{FFW} is set equal to C_{FFW} for any pollutant detected in the discharge.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-76. Criteria long-term averages for implementation of human health and raw water criteria for toxic substances to protect the Public and Private Water Supply beneficial use
See Equations M-5 and M-6.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-77. Development of permit limitations for the implementation of human health and raw water criteria for toxic substances to protect the Public and Private Water Supply beneficial use
MAL_{FFW} and DML_{FFW} are calculated from LTA_{FFW}. MAL_{RAW} and DML_{RAW} are calculated from LTA_{RAW}. MAL_{FFW} and MAL_{RAW} are compared with all other applicable criterion MALs. The most stringent MAL and associated DML are included in the permit.
(1) **MAL_{FFW} and MAL_{RAW}**. MAL_{FFW} and MAL_{RAW} are equal to their respective criterion LTAs in accordance with Equation M-7.

(2) **DML_{FFW} and DML_{RAW}**. DML_{FFW} and DML_{RAW} are determined on a 99% probability basis according to Equation M-8.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-78. Implementation of bacterial criteria to protect the Public and Private Water Supply beneficial use

Public and Private Water Supply bacterial limitations apply at all times at a point of intake. However, for waters with the PBCR beneficial use, the PBCR bacterial requirements are more stringent during the recreation season and limitations developed under 252:606-6-86 apply. Permits for point source discharges of bacteria that are located less than five stream miles upstream of a water supply intake or discharges to a lake located within five miles of a water supply intake will include a total coliform MAL of 5000/100 mL expressed as a geometric mean and a DML of 20,000/100 mL. The limit does not apply to discharging lagoons in compliance with OAC 252:656-11-2(b) unless Water Quality Standards are violated.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-79. Implementation of mineral constituent criteria to protect the Agriculture beneficial use

For implementation of mineral constituent criteria to protect the Agriculture beneficial use, see OAC 252:606-6-79 through 6-85.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-80. Effluent regulatory flows for the implementation of mineral constituent criteria to protect the Agriculture beneficial use

For regulatory flows use the following:

(1) **Industrial**. For industries:

(A) **YMS criterio**n. $Q_{e(LTA)}$ is used as the regulatory effluent flow.

(B) **SS criterion**. $Q_{e(30)}$ is used as the regulatory effluent flow.

(2) **Municipal**. $Q_{e(D)}$ is used as the regulatory effluent flow.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-81. Q* ratio for the implementation of mineral constituent criteria to protect the Agriculture beneficial use

Use the following to determine Q*:

(1) **YMS criterion**. For YMS criterion:

(A) **Industrial effluent**. Q* is the ratio of $Q_{e(LTA)}$ to $Q_{u(LTA)}$.

(B) **Municipal effluent**. Q* is the ratio of $Q_{e(D)}$ to $Q_{u(LTA)}$.

(2) **SS criterion**. For SS criterion:

(A) **Industrial effluent**. Q* is the ratio of $Q_{e(30)}$ to $Q_{u(STA)}$.

(B) **Municipal effluent**. Q* is the ratio of $Q_{e(D)}$ to $Q_{u(STA)}$.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-82. Reasonable potential to exceed YMS and SS criteria

Where agriculture criteria are applicable, $C_{d(YMS)}$ and $C_{d(SS)}$ are calculated for each mineral constituent. Also see OAC 252:740.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-83. Wasteload allocations for the implementation of mineral constituent criteria to protect the Agriculture beneficial use

If either $C_{d(YMS)}$ or $C_{d(SS)}$ exceeds its respective criterion, a water quality-based permit limit is required for that mineral constituent. WLA_{YMS} and WLA_{SS} are calculated for each mineral constituent exhibiting reasonable potential. Background levels used in calculating agriculture-based WLAs are described in OAC 252:606-6-10 through 6-13 and 6-16.

(1) **WLA_{YMS}**. Equation N-1 is used to calculate WLAYMS.

(2) **WLA_{SS}**. Equation N-2 is used to calculate WLASS.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-84. Criteria long-term averages for the implementation of mineral constituent criteria to protect the Agriculture beneficial use

(a) **LTA_{YMS}**. $LTA_{YMS} = WLA_{YMS}$. See Equation N-3.

(b) **LTA_{SS}**. LTA_{SS} is calculated using a 99% probability basis according to Equation N-4. A CV value of 0.6 is assumed in determining LTA_{SS} unless a CV was determined from effluent data in accordance with OAC 252:606-6-7.

(c) **Limiting LTAs**. LTA_{YMS} and LTA_{SS} are compared with each other for each mineral constituent, and the more stringent of the two LTAs is the limiting LTA for that mineral constituent, as described in Equations N-5, N-6, and N-7.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-85. Development of permit limitations for the implementation of mineral constituent criteria to protect the Agriculture beneficial use

The higher of 250 mg/L or the limiting LTA is used to develop chloride and sulfate permit limitations. The higher of 700 mg/L or the limiting LTA is used to develop TDS permit limitations.

(1) **MAL**. MAL_{CL}, MAL_{SO4} and MAL_{TDS} are each determined on a 95% probability basis according to Equations N-8, N-9, and N-10, respectively.

(2) **DMLs**. DML_{CL}, DML_{SO4} and DML_{TDS} are also determined on a 95% probability basis according to Equations N-11, N-12, and N-13, respectively.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-86. Implementation of bacterial criteria to protect the Primary Body Contact Recreation (PBCR) and the Secondary Body Contact Recreation (SBCR) beneficial use

(a) **PBCR waterbodies - May 1 through September 30**. When the use of a bacterial indicator is determined to be necessary, the following bacterial limitations shall apply from May 1 through September 30 to protect the PBCR beneficial use:

(1) ***Escherichia coli* (E. coli)**. When E. coli is the bacterial indicator:

(A) The monthly geometric mean shall not exceed 126/100 mL.

(B) The daily maximum for lakes shall not exceed 235/100 mL.

(C) The daily maximum for all waterbodies other than lakes shall not exceed 406/100 mL.

(2) ***Enterococci***. When enterococci are the bacterial indicator:

(A) The monthly geometric mean shall not exceed 33/100 mL.

(B) The daily maximum for lakes shall not exceed 61/100 mL.

(C) The daily maximum for all waterbodies other than lakes shall not exceed 108/100 mL.

(b) **PBCR waterbodies - October 1 through April 30**. When the use of a bacterial indicator is determined to be necessary, the SBCR bacterial limitations listed in (c) of this Section, shall apply from October 1 through April 30 to protect the PBCR beneficial use when the receiving stream is on the 303(d) List for bacteria.

(c) **SBCR waterbodies**. One of the following bacterial limitations and monitoring requirements shall be used year-round for permittees that discharge fecal coliform to waterbodies on the 303(d) list for bacteria:

(1) ***Escherichia coli* (E. coli)**. When E. coli is the bacterial indicator:

(A) The monthly geometric mean shall not exceed 630/100 mL.

(B) The daily maximum for lakes shall not exceed 1175/100 mL.

(C) The daily maximum for all waterbodies other than lakes shall not exceed 2030/100 mL.

(2) ***Enterococci***. When enterococci are the bacterial indicator:

(A) The monthly geometric mean shall not exceed 165/100 mL.

(B) The daily maximum for lakes shall not exceed 305/100 mL.

(C) The daily maximum for all waterbodies other than lakes shall not exceed 540/100 mL.

(d) **Indicators used in WLA**. Regardless of which bacterial indicator was used in a permittee's WLA, the permit may contain either of the bacterial indicators listed in (c) of this Section.

(e) **Exception**. This Section does not apply to discharging lagoons that were permitted and are being operated in compliance with OAC 252:656-11-2(b), unless Water Quality Standards are violated.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-87. Implementation of criteria to protect the Aesthetics beneficial use

(a) Limitations and monitoring requirements for pollutants from previous permits are retained.

(b) Limitations and monitoring requirements may be established on a case-by-case basis to protect the aesthetics beneficial use of the receiving water established in OAC 252:730.

(c) For effluents containing lignins, tannins, dyes, and other organic or inorganic chemicals that cause true color, the narrative water quality criterion for color shall be implemented by limiting the instream concentration after mixing to 70 Platinum-cobalt true color units based on a simple mass balance calculation. The following regulatory effluent flows apply for the implementation of the color criterion to protect the Aesthetics beneficial use:

(1) for industrial facilities, $Q_{e(30)}$; and

(2) for municipal facilities, $Q_{e(D)}$.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-88. Effluent monitoring

Control tests for effluent monitoring for certain effluent parameters, excluding WET testing contained in OAC 252:606-6-41 and 42, are specified in OAC 252:606, Appendix A. For pollutants not addressed in OAC 252:606, Appendix A, DEQ will consider the potential for effluent variation in establishing monitoring frequencies, subject to the minimum frequencies prescribed at OAC 252:606-6-89 for the initial permit cycle. In cases of effluent data sets with less than 10 data points, effluent monitoring may be warranted where reasonable potential for a substance to exceed an applicable criterion is not exhibited. When a control test is undertaken for a parameter listed in an OPDES permit, the results of the control test shall be reported to DEQ on the DMR for that month. The control test may be used to meet the required effluent monitoring as specified in the OPDES permit if the control test sample meets all the sample protocol requirements as contained in the OPDES permit.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-89. Effluent monitoring frequency when permit limitations are required

(a) When monitoring is required in a permit, the following are the minimum monitoring frequencies for parameters during the initial permit cycle:

(1) once a week for temperature limits.

(2) twice a month for aquatic toxicity criterion-based limits, human health and raw water criterion-based limits, and agriculture criterion-based limits.

(3) for bacterial limitations:

(A) twice a week between May 1 through September 30, during the recreational period,

(B) once a week, outside of the recreational period, if the receiving stream is impaired for bacteria, and

(C) once a week for total coliform limits, unless bacterial limitations for PBCR are also established in the permit, in which case the minimum total coliform monitoring frequency will be once a week for the period October 1 through April 30.

(b) DEQ may increase the monitoring frequencies listed in (a)(1) and (2) of this Section for a period not to exceed one year during the initial permit cycle for the purpose of establishing the pattern and extent of variation for a given pollutant.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-90. Effluent monitoring where permit limitations are not required

Where the discharge is new or where the C_{95} concentration does not exhibit reasonable potential and less than ten data points are available to characterize an effluent distribution, effluent monitoring for a limited period may be required so that reasonable potential may be reevaluated.

(1) **Existing discharges**. $C_{95(M)}$ is determined according to Equation I-9. $C_{95(M)}$ is used in place of C_{95} in the various reasonable potential equations, and if reasonable potential is exhibited using $C_{95(M)}$, effluent monitoring is required as a permit condition. The monitoring frequency must be sufficient to provide at least ten data points over a period of three months to one year.

(2) **New discharges**. $C_{95(M)}$ is determined based on the estimated maximum effluent concentration for a substance according to Equation I-9. If reasonable potential is exhibited using $C_{95(M)}$, effluent monitoring is required as a permit condition in the same manner as for existing discharges.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-91. Performance-based monitoring frequency reductions and increases

(a) When MALs have been established in a previous permit and a parameter(s) has been monitored for one complete permit cycle (five years), performance-based monitoring frequency reductions or increases will be considered. Performance-based monitoring frequency reductions for waterbodies with an impairment shall not be permitted for the impaired parameter.

(1) Except for ammonia, when a permittee has experienced:

(A) no permit limit violation of any kind for a limited parameter during the permit cycle, a performance-based monitoring frequency reduction may be granted according to Table O-1 in Appendix O.

(B) a non-SNC permit limit violation during the permit cycle, the permittee is ineligible for a performance-based monitoring frequency reduction for that parameter for the ensuing permit cycle.

(C) SNC violations for a parameter during the permit cycle, the permittee is:

(i) ineligible for a performance-based monitoring frequency reduction for that parameter for the ensuing permit cycle, and

(ii) a monitoring frequency increase is required in accordance with Table O-2 in Appendix O.

(2) Permittees may request toxicity-based ammonia limit monitoring frequency reductions according to 252:606-6-26 or WET testing frequency reductions according to 252:606-6-42.

(3) The monitoring frequency for a metal may be reduced below the levels stated in Table O-1 in Appendix O to once every six months if:

(A) the permit includes a long-term average effluent concentration for the permit cycle of less than ten percent (10%) of the Monthly Average Concentration Limit;

(B) it no longer exhibits reasonable potential (either from monitoring or effluent limit);

(C) there is a limit for that parameter in a previous permit that cannot be removed; and

(D) the parameter is not causing the receiving water body to be listed as a Category 5 water body in Oklahoma's Integrated Report.

(b) Performance-based monitoring frequency reductions shall not be based on a weekly average, a daily minimum or a daily maximum concentration limit.
(c) The permit frequency reductions stated in this Section and in Appendix O do not affect the need or number of control tests to be undertaken as required in Appendix A of 252:606.
(d) In accordance with 252:730-5-10 and 252:730-5-16, no frequency reduction shall be allowed for bacterial limitations.
(e) Any control test undertaken in accordance with OAC 252:606, Appendix A, shall be reported on the DMRs as required by 40 CFR § 122.41 (l)(4)(ii), provided the control test sample meets all the sample protocol requirements as contained in the OPDES permit.

[**Source:** Amended at 43 Ok Reg, Number 21, effective 9-15-26; Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-92. Reopener clause

DEQ will include a reopener clause in permits where effluent or background monitoring is required for the purpose of adjusting, adding or removing permit limitations, if warranted, after collection and evaluation of the effluent or background data.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-6-93. Monitoring for a nutrient limited watershed

A permittee shall monitor monthly for total nitrogen and/or total phosphorus if the discharge is to a nutrient limited watershed as designated in OAC 252:730.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

SUBCHAPTER 7. BIOSOLIDS PERMIT REQUIREMENTS [REVOKED]

252:606-7-1. Permit required [REVOKED]

[**Source:** Revoked at 26 Ok Reg 1901, eff 7-1-09; Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-7-2. Permit applications [REVOKED]

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Revoked at 26 Ok Reg 1901, eff 7-1-09]

252:606-7-3. Certification required [REVOKED]

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Revoked at 26 Ok Reg 1901, eff 7-1-09]

252:606-7-4. Sludge (biosolids) management plan [REVOKED]

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Revoked at 26 Ok Reg 1901, eff 7-1-09]

252:606-7-5. Permit modifications [REVOKED]

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Revoked at 26 Ok Reg 1901, eff 7-1-09]

252:606-7-6. Restrictions applicable to all land application [REVOKED]

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Revoked at 26 Ok Reg 1901, eff 7-1-09]

252:606-7-7. Laboratory analyses [REVOKED]

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Revoked at 26 Ok Reg 1901, eff 7-1-09]

252:606-7-8. Compliance required [REVOKED]

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Revoked at 26 Ok Reg 1901, eff 7-1-09]

252:606-7-9. Monitoring wells [REVOKED]

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Revoked at 26 Ok Reg 1901, eff 7-1-09]

SUBCHAPTER 8. BIOSOLIDS REQUIREMENTS

252:606-8-1. Permits and prohibitions

(a) Any person or entity that intends to produce a Class A or a Class B biosolid must obtain a permit and an approved sludge management plan from DEQ.
(b) For all changes in permitted uses, sites, methods of land application, treatment and sludge management plans the generator or operator must obtain a permit modification as required by 27A O.S.§ 2-6-501(B).
(c) Surface disposal under Part 503, Subpart C of 40 CFR, is specifically prohibited. This prohibition does not apply to disposal of biosolids in a municipal solid waste landfill that is permitted by DEQ.

[**Source:** Added at 26 Ok Reg 1901, eff 7-1-09; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

252:606-8-2. Permit applications

A permit application to produce Class A or Class B biosolids must be typed or computer printed and include:

(1) the name, address, and telephone number of the applicant or the applicant's authorized representative;
(2) the name, mailing address, and telephone number of the generator or operator and the land applier, if different, and contact person from each source;
(3) a brief description of the biosolids including a list of the major commercial or industrial facilities that discharge to the municipal treatment system;
(4) a description of the use or disposal practices and locations of any sites for transfer of the biosolids for treatment, use, land application, and/or disposal;
(5) laboratory test results of a representative soil sample from each proposed site in the permit application. The composite soil samples must be tested, and background levels set, for the metals listed in Tables 1 and 3 of 40 CFR § 503.13(b), pH, and the nutrients - nitrogen (N), ammonia (NH_4), nitrates (NO_3), potassium (K) and phosphorus (P);
(6) a list of environmental state or federal permits held by the applicant; and
(7) if a facility, generator, and/or land application site is located in the watershed of an Outstanding Resource Water as defined in OAC 252:730, the Outstanding Resource Water shall be identified.

[**Source:** Added at 26 Ok Reg 1901, eff 7-1-09; Amended at 28 Ok Reg 1231, eff 7-1-11; Amended at 40 Ok Reg 241, eff 10-25-22 (emergency); Amended at 40 Ok Reg 2018, eff 9-15-23]

252:606-8-3. Sludge (biosolids) management plan

(a) All sludge management plans shall be submitted with the permit application and include the following:

(1) a breakdown of the anticipated types and volumes of biosolids generated;
(2) daily generation and annual production of semi-solids, solids as total volume and percent solids converted to dry tons;
(3) laboratory analysis including TCLP reports showing whether the biosolids are hazardous and the chemical and physical properties of biosolids to be land applied including concentrations of metals (listed and other), and any other pollutants;
(4) the amount of biosolids from each source expected to be used or disposed during each year of operation;

(5) a description of treatment methods including pathogen treatment and vector attraction reduction, including plant operational controls and record-keeping forms that document biosolids treatment;
(6) irrigation practices, if any; and
(7) a demonstration that the biosolids shall not be stored for greater than six months without prior written approval from DEQ, and in no case longer than one year, prior to use, land application or disposal.

(b) In addition to the requirements listed in subsection (a) above, Class A sludge management plans must be submitted with the following additional information:
(1) the proposed schedule for the laboratory analysis to determine the presence or absence of fecal coliform or salmonella;
(2) the amount of Class A biosolids expected to be generated and produced each year;
(3) proposed application process for the Class A biosolids;
(4) a list of proposed uses for the Class A biosolids;
(5) whether the Class A biosolids will be made available to the general public;
(6) a fact sheet describing the proper uses and agronomic rates of the Class A biosolids that shall be distributed when the general public is receiving the Class A biosolids; such fact sheets shall not be required when the generator itself uses the Class A biosolids;
(7) description of the storage of the Class A biosolids until used or distributed; and
(8) a fact sheet describing the appropriate best management practices for the use of the Class A biosolids that are received from the generator.

(c) In addition to the requirements listed in subsection (a) above, Class B sludge management plans must be submitted with the following additional information:
(1) information on how biosolids will be transported from the point of generation to the use, land application or disposal site, including transfer and storage information and a map showing the location of sources of the biosolids, proposed transportation routes, and the location of related containment, storage, and transfer facilities;
(2) the amount of biosolids from each source expected to be used or disposed during each year of operation;
(3) identification of specific sites and identifying name for each;
(4) documentation of the applicant's right to use the site, including time restrictions, if any;
(5) land use descriptions of adjacent property;
(6) finding description(s), legal description(s), and latitude and longitude of each site;
(7) distance to nearest residence;
(8) topography of the site;
(9) soil types, permeability, infiltration and drainage patterns;
(10) proposed methods of field types, tillage, crop types and patterns, crop utilization, expected yield and final use of crop;
(11) depth to groundwater, including highest seasonal groundwater level, and any other data available;
(12) records of previous land application conducted at the site, including data on the cumulative metal loading;
(13) results of any sampling, analyses or monitoring previously performed by the applicant at the site, including metal and nutrient assessment, based on an annual and lifetime use;
(14) access controls;
(15) narrative description of buffer zones and other methods to be used to control surface drainage, stormwater runoff, and erosion at each site;
(16) documentation demonstrating how the biosolids will be incorporated into the soil before the end of each working day;
(17) documentation that the biosolids will not be land applied within two feet of the highest seasonal water table nor applied to the land within 100 feet of a stream or body of water;
(18) documentation that the biosolids will not be land applied within 250 feet of a public or private water supply;
(19) equipment to be used;

(20) narrative description of proposed land application method and related details including depth and frequency of incorporation or injection;
(21) estimated application rate, frequencies, rest periods between applications, and estimated life of the site. Include calculations on which estimates are based for cumulative metal loading rates;
(22) emergency response plan describing the actions to be taken by the applicant, including notice for corrective action and remediation associated with spills and releases;
(23) NRCS soil map of each specific site which shows soil classification, suitability, and soil profiles to a depth of 60 inches;
(24) highway map which shows the location of each specific site as relative to communities, cities, towns, schools, highway access roads and airports;
(25) quadrangle topographic map or maps that is an original U.S.G.S. 7.5 minute series (or 15 minute series if the 7.5 series has not yet been printed) with the following clearly marked:
(A) boundary of the site;
(B) public water supply sources and treatment facilities;
(C) pipelines and utility easements;
(D) oil or gas wells or drilling sites;
(E) wellhead delineation areas;
(F) groundwater flow direction;
(G) waters of the state with special emphasis for "scenic rivers";
(H) parks, recreation areas and any government owned land dedicated for special purposes (for example, wildlife refuges);
(I) identification of the 100-year flood plain or floodway if it affects the proposed site;
(J) any area inhabited by an endangered or threatened wildlife or plant species listed under Section 4 of the federal Endangered Species Act, 16 U.S.C. 1533(c); and
(K) any additional information determined necessary by DEQ.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 28 Ok Reg 1231, eff 7-1-11; Added at 26 Ok Reg 1901, eff 7-1-09]

252:606-8-4. Class A biosolid production
(a) The construction of facilities to produce a Class A biosolid shall be permitted by DEQ and meet the requirements located in OAC 252:656-19.
(b) **Compost.**
(1) Composted Class A biosolids are produced by:
(A) combining the biosolids produced at a wastewater treatment plant with wood chips or other source of carbon approved by DEQ;
(B) the materials being heated, through the controlled biological decomposition of organic material that has been sanitized through the generation of heat and processed to further reduce pathogens in accordance with the requirements contained in 40 CFR, Part 503, and stabilized to the point that the material is beneficial to plant growth through:
(i) the within-vessel composting method or the static aerated pile composting method where the temperature of the sewage sludge is maintained at 55E Celsius (131E Fahrenheit) or higher for three or more consecutive days; or
(ii) the windrow composting method wherein the temperature of the sewage sludge is maintained at 55E Celsius (131E Fahrenheit) or higher for 15 or more days. During the period when the compost is maintained at 55E Celsius (131E Fahrenheit) or higher for 15 or more days, there shall be a minimum of five turnings of the windrow;
(C) the combined material being removed to a second location to complete the curing process; and
(D) being processed or tested to demonstrate that the material meets the pathogen reduction requirements of 40 CFR§ 503.32 (a) and the vector attraction reduction requirements of 40 CFR§ 503.33 prior to use.
(2) Upon completion of the process, the compost may be used as described in the sludge management plan.

(c) **Other Class A biosolid production methods.**

(1) For all other Class A production methods, the following requirements must be met:

(A) The applicant shall submit to DEQ a plan for the production of the Class A biosolids, which must receive approval from DEQ;

(B) The applicant shall perform a pilot study on the DEQ-approved process for at least one year to determine that the process meets the requirements of 40 CFR§ 503.32 (a) and 40 CFR§ 503.33;

(C) The Class A biosolid production method shall include a process for the biosolids to be dewatered, unless a waiver of the dewatering requirement is granted by DEQ;

(D) The process shall be approved by EPA; and

(E) The applicant shall receive a final approval from DEQ before distributing the Class A biosolid.

(2) Upon completion of the requirements at OAC 252:606-8-4(c)(1), the Class A biosolid may be used as described in the sludge management plan.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Added at 26 Ok Reg 1901, eff 7-1-09]

252:606-8-5. Class B biosolid production

(a) The construction of facilities to produce Class B biosolids shall be permitted by DEQ and meet the requirements located in OAC 252:656.

(b) Prior to use or disposal in a landfill, the Class B biosolids shall be processed and/or tested and must meet the pathogen reduction requirements of 40 CFR § 503.32 (b) and vector attraction reduction requirements of 40 CFR § 503.33.

(c) Class B biosolids may be disposed in a landfill permitted by DEQ or may be land applied pursuant to the requirements of state law and the requirements of this subchapter, in accordance with the DEQ approved sludge management plan or sludge disposition plan.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 28 Ok Reg 1231, eff 7-1-11; Added at 26 Ok Reg 1901, eff 7-1-09]

252:606-8-6. Land application of biosolids

(a) **Compliance.** All permittees shall operate a land application site pursuant to the terms of the DEQ issued permit and DEQ approved sludge management plan.

(b) **Requirements.**

(1) **Certification.** When required by DEQ, the owner, generator or operator must certify that the land application system will be operated according to this Chapter.

(2) **One applier.** A land application site shall be used by only one land applier at a time unless DEQ approves other users.

(3) **Subsequent use for land application.** DEQ may approve a previously used land application site for subsequent land application.

(4) **Multiple sources.** A land applier who owns or operates more than one source facility or surface impoundment may utilize the same land application site for the application of biosolids from the multiple facilities or impoundments with prior written approval of DEQ.

(5) **Topography.** A land application site must have minimal slope or be contoured to prevent ponding and soil erosion. No application can occur on land having a slope exceeding five percent (5%) but less than ten percent (10%) unless erosion or runoff controls are implemented for liquid biosolids. Land having a slope greater than ten percent (10%) may be utilized for land application of dewatered and dried biosolids only with DEQ approval.

(6) **Off-site hauling.** The owner, generator or operator must prevent biosolids and mud from a land application site from being carried off-site. If necessary, biosolids hauling vehicles must be cleaned prior to leaving the site and the rinse water disposed of in accordance with DEQ rules.

(7) **Manner.** Land apply sludge in a manner to prevent surface runoff and to control objectionable odors. Incorporate sludge into the soil before the end of each working day. Do not store or land apply, or allow to run off, sludge or wastewater to wetlands or waters of the state. Discharges to waters of the state are prohibited without a discharge permit under OAC 252:606.

(8) **pH limits.** Any site with soil having a natural pH of less than 5.5 cannot be used for the land application of biosolids unless the soil pH is amended prior to application of biosolids. Documentation of soil amendment must be placed in the land applier's compliance records.

(9) **Phosphorus and nitrogen.** Annual biosolids land application rate cannot exceed nitrogen and phosphorus rates for the crop grown and cannot be applied in rates that result in phytotoxicity.

(10) **Soil sampling.**

(A) **Sample and analysis.** All background and annual soil sampling and analyses must be of a composite sample taken from an area 80 acres or less in size for each site proposed or used for the land application of biosolids. DEQ may approve larger sampling areas on a case by case basis. Soil testing procedures applicable for use in the local area in accordance with Oklahoma State University soil testing guidance or the local NRCS may be used.

(B) **Operational soil monitoring.** A land applier must collect representative soil samples and have them analyzed as follows:

(i) For soil pH and the nutrients - nitrogen (N), ammonia (NH4), nitrates (NO3), potassium (K) and phosphorus (P) prior to the next annual application of biosolids;

(ii) For metals in Table 3 of 40 CFR § 503.13(b) after every third year of use prior to the fourth year of use; and

(iii) For all required background metals prior to the fourth year of biosolids application on each site.

(11) **Laboratory analyses.**

(A) All biosolids analyses required by this Subchapter must be performed by an accredited laboratory.

(B) All soil analyses performed under 606-8-6(b)(10)(B)(i) must be performed by an accredited laboratory or by a university laboratory that demonstrates to the reasonable satisfaction of DEQ to have the analytical expertise and be familiar with Oklahoma crops and soils.

(12) **Monitoring wells.** DEQ may require monitor wells and boreholes in connection with the land application of biosolids. These wells must be designed, constructed and plugged in accordance with OAC 785:35.

(c) **Restrictions.**

(1) **Weather.** Do not land apply when the ground is frozen or saturated.

(2) **Endangered or threatened species.** Land application cannot occur if it is likely to adversely affect a threatened or endangered species listed under Section 4 of the federal Endangered Species Act, 16 U.S.C. 1533(c), or the critical habitat of such species.

(3) **Metal and selenium concentration limits.** A land applier must notify DEQ by telephone within 24 hours and follow up with a written report if the metal or selenium concentrations exceed those in 40 CFR § 503.13(b)(3) (Table 3) or risk the revocation of the land application permit. Municipal biosolids that exceed the metal or selenium concentration limits set forth in 40 CFR, § 503.13(b)(1) (Table 1) cannot be land applied, but may be:

(A) incinerated at an incinerator permitted by DEQ; or

(B) disposed at a solid waste landfill permitted by DEQ for such waste disposal. Any biosolids disposed in a landfill must meet the pathogen and vector reduction requirements of this Subchapter.

(4) **Heavy Metals.** DEQ shall not approve the land application of biosolids that contains heavy metals above the concentration ranges normal to biosolids or sludges with a demonstrated effectiveness on Oklahoma soils, unless the permittee provides a study on the effects of the biosolids on a variety of Oklahoma soils and crops found at the location of the proposed land application site. Said study shall:

(A) be conducted by a qualified research institute familiar with crops and soils in Oklahoma and approved by DEQ;

(B) be included with the sludge management plan; and

(C) demonstrate the effect of the sludge during four growing seasons.

(5) **Biosolids generated outside the State of Oklahoma.** For municipal biosolids, whether Class A or Class B generated outside the State of Oklahoma, the biosolids produced shall meet all federal

and state statutory requirements and DEQ shall receive and approve test results demonstrating the quality of the biosolids, including samples of each load of biosolids performed by an independent laboratory approved by DEQ and an agreement that DEQ may perform random quality assurance sampling at the site of the generation of the biosolids prior to any biosolids coming into the State of Oklahoma.

(6) **Karst soils.** The use of land application sites that overlie areas subject to karstification (i.e. sink holes or underground streams generally occurring in areas underlain by limestone, gypsum or dolomite), is prohibited, unless approved by DEQ.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Added at 26 Ok Reg 1901, eff 7-1-09; Amended at 32 Ok Reg 977, eff 9-15-15]

252:606-8-7. Biosolid land application site closure and remediation

(a) **Closure.** A specific land application site may be closed as a land application site at any time by the permittee or by requirement of DEQ.

(b) **Notice.** Prior to closure, the permittee must provide a written notice to DEQ at least ninety (90) days before commencing the proposed closure.

(c) **Remediation plan.** When site-specific testing and monitoring indicates the presence of pollution or deterioration of a site, DEQ will require a generator or operator to submit, receive approval of and perform a remediation plan.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Amended at 28 Ok Reg 1231, eff 7-1-11]

SUBCHAPTER 9. LAND APPLICATION OF BIOSOLIDS [REVOKED]

252:606-9-1. Prohibitions [REVOKED]

[**Source:** Revoked at 26 Ok Reg 1901, eff 7-1-09; Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-9-2. Land application exceptions and alternatives [REVOKED]

[**Source:** Revoked at 26 Ok Reg 1901, eff 7-1-09; Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-9-3. Site use for land application [REVOKED]

[**Source:** Revoked at 26 Ok Reg 1901, eff 7-1-09; Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-9-4. pH and nutrient limits [REVOKED]

[**Source:** Revoked at 26 Ok Reg 1901, eff 7-1-09; Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-9-5. Soil sampling [REVOKED]

[**Source:** Revoked at 26 Ok Reg 1901, eff 7-1-09; Added at 21 Ok Reg 1584, eff 6-11-04]

SUBCHAPTER 11. TESTS AND REPORTS

252:606-11-1. Sample reporting terms

The following apply to all dischargers:

(1) Calculate Average Concentration (in mg/L or ug/L) as the sum of the sample concentrations taken (and analyzed) during the month divided by the number of samples analyzed. Report average concentrations on the SMR/DMR form if numerical limitations are given or reporting is required by the permit.

(2) Calculate Average Limitations as follows:

(A) "7-day average" or "weekly average", other than for bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The "7-day average" for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
(B) "30-day average" or "monthly average", other than for bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The "30-day average" for bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.

(3) The Daily Average Concentration means the arithmetic mean (weighted by flow value) of all the daily determinations of concentration made during a calendar month. Daily determinations of concentration made using a composite sample must be the concentration of the composite sample. When grab samples are used, the daily determination of concentration must be the arithmetic mean (weighted by flow value) of all the samples collected during that calendar day.

(4) The numerical limitations listed under Maximum Allowable Concentration (in mg/L or ug/L) represent the highest level of the pollutant which is allowed to be discharged to a receiving water under any flow conditions of the effluent. The permittee must report the highest single concentration for all samples analyzed during the month on the SMR/DMR form if numerical limitations are given or reporting is required by the permit.

(5) The Daily Maximum Concentration means the highest daily determination of concentration for any calendar day.

(6) Determine the Daily Average Discharge by calculating the total discharge by weight during a calendar month divided by the number of days of operation in the month. Where less than daily sampling is required by the permit, the daily average discharge must be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.

(7) The Daily Maximum Discharge means the total discharge by weight during any calendar day.

(8) The loading (in lbs/day) is calculated by multiplying each sample concentration (in mg/L) by the simultaneous effluent flow rate (in MGD) with a conversion factor of 8.34 stated in the equation: Loading (in lb/day) = Concentration (in mg/L) x Simultaneous Effluent Flow Rate (in MGD) x 8.34.

(9) Determine the Average Loading by the sum of all the loadings divided by the number of loadings calculated.

(10) The Maximum Loading is reported as the highest single loading for all samples analyzed during the month.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-11-2. Laboratory analyses and reporting

(a) **Compliance test results.** Analytical results obtained through compliance testing must be from an accredited laboratory. Non-accredited laboratories at municipal wastewater treatment plants must have operators certified under OAC 252:710.

(b) **Sample collection.** Collect samples during normal operation and representative of the discharge, according to 40 CFR § 136.3 Table II (containers, preservation and holding times).

(1) A grab sample must consist of one sample collected in less than a 15-minute period.

(2) A composite sample must consist of at least three discrete samples of equal volume taken at equal time intervals over the composite period, or taken proportional to flow rate, and combined into one. 24-hour composite samples must contain at least 12 discrete samples. The number of discrete samples must be increased where the wastewater loading is highly variable.

(3) Continuous or totalized samples must be continuously and automatically taken or recorded.

(c) **Flow measurement.** Determine the volume of flow at the time of sample collection and report it with the analytical results. Measurement devices and methods must be installed, calibrated and maintained to

measure flows within 10% of true discharge rates. Records of pump running times and rates, if accurate, may be used to calculate total daily flow.
(d) **DMR reports.** The results of all valid compliance tests must be used to complete DMR forms (DEQ-approved discharge monitoring report form; see 40 CFR § 122.41(L)(4)(i)). Mail DMR forms to the Water Quality Division at the frequency required in the permit. Any DMR report submitted to DEQ pursuant to this Chapter shall be submitted on forms provided by DEQ and shall be delivered to DEQ:

(1) in person,
(2) by mail, or
(3) electronically, provided the electronic submission meets the requirements of 252:4-17.

[**Source:** Amended at 32 Ok Reg 977, eff 9-15-15; Amended at 28 Ok Reg 1231, eff 7-1-11; Added at 21 Ok Reg 1584, eff 6-11-04]

252:606-11-3. Municipal testing for permits and operations

(a) The provisions of this Section are minimum requirements.
(b) Results of all control tests must be made available to plant operators in a timely fashion for use in operational control of the facility.
(c) All plants must determine the daily flow and enter it in the operating records at the frequency specified in the permit. Flow measurements are also necessary when composite samples are collected. For plants not equipped with continuous flow recorders, occasional determinations of the flow over a 24-hour period will be necessary to establish a flow pattern so that occasional flow measurements will provide an indication of the total flow.
(d) Minimum control tests are tabulated in Appendix A of this Chapter, entitled, "Minimum Control Tests for Wastewater Treatment Facilities" and Appendix G of this Chapter, entitled, "Monitoring Frequencies for Backwash Discharge from Potable Water Treatment Facilities." In addition to these tests, routine observations, tests or measurements as to the quantity and quality of screenings, grit, sludge pumped from clarifiers, sludge/residuals drawn to drying beds or other means of disposal, the weather conditions must be entered in the operating records. The Executive Director may require that all effluent samples be collected from the outfall pipe at the point of discharge where conditions are such that the effluent quality will likely be different at this point than it is in the final treatment or storage unit.
(e) When required in a municipal facility's discharge permit, stream monitoring samples shall be collected instream above and below the point of wastewater discharge with consideration to the following factors: ease of access, mixing of plant effluent and the receiving stream, and the oxygen "sag" point of the receiving stream.

(1) Determine dissolved oxygen, temperature, pH, and stream appearance twice per month at least two weeks apart, but not more often than required in the permit for effluent sampling for BOD_5.
(2) Test for indicator bacteria twice per month at least two weeks apart, but not more often than required in the permit for effluent sampling for bacteria, if the permit for discharge contains bacteria limits.
(3) DEQ may require additional tests when problems develop in plant operation, or as necessary to determine compliance with the purposes and objectives of this Chapter.

(f) The Executive Director may grant variances from the requirements in this Section upon a written request and a showing by the permittee that the requested variance will:

(1) Not adversely affect the quality of the discharge or the environment;
(2) Avoid an excessive requirement; and
(3) Not hinder the proper operations of the treatment facility.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 28 Ok Reg 1231, eff 7-1-11; Amended at 31 Ok Reg 1297, eff 9-12-14]

252:606-11-4. Records

(a) **Operating records.** Keep a daily record of the control tests required in Appendix A of this Chapter on forms prepared or approved by DEQ. Make entries for the date samples are collected and indicate where and by whom the observations were made. If monitoring beyond the minimum requirements, include the

results of all analyses on the monthly report and use them to calculate weekly or monthly averages. For each required measurement or sample, record:

(1) The date, exact place and time of sample and indicate whether a grab sample or composite.
(2) The dates the analyses were performed.
(3) The laboratory and name of the operator who performed each analysis.
(4) The analytical techniques or methods used.
(5) The results of all analyses.
(6) The instantaneous flow at the time of grab sample collection or a record of each flow taken while collecting a composite sample.
(7) The method of composite sample calculations and other calculations.

(b) **Maintain records.** The facility owner must keep records of all control and compliancetesting, a copy of the monthly operational report and all laboratory work sheets for at least three years. These records must be available for inspection by DEQ personnel.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 28 Ok Reg 1231, eff 7-1-11; Amended at 32 Ok Reg 977, eff 9-15-15]

252:606-11-5. Industrial flow measuring and sampling

(a) If required by DEQ, place a flow-measuring device to measure only the wastewater discharge.
(b) Provide easily accessible sampling points at the outfall of each treatment structure.
(c) Upon request by DEQ, provide five days prior notice to DEQ of the next sampling schedule so that DEQ personnel may be present to observe and collect split samples.
(d) Minimum process control tests are tabulated in Appendix A of this Chapter, entitled, "Minimum Control Tests for Wastewater Treatment Facilities." The Executive Director may require that all effluent samples be collected from the outfall pipe at the point of discharge where conditions are such that the effluent quality will likely be different at this point than it is in the final treatment or storage unit.
(e) When required in a facility's discharge permit, stream monitoring samples must be collected instream above and below the point of wastewater discharge with consideration to the following factors: ease of access; mixing of plant effluent and the receiving stream; and the oxygen "sag" point of the receiving stream.

(1) Determine dissolved oxygen, temperature, pH, and stream appearance as noted in the permit twice per month at least two weeks apart, but not more often than required in the permit for effluent sampling for BOD_5.
(2) Test for coliform bacteria twice per month at least two weeks apart, but not more often than required in the permit for effluent sampling for coliform, if the permit for discharge contains coliform limits.
(3) DEQ may require additional tests when problems develop in plant operation, or as necessary to determine compliance with the purposes and objectives of this Chapter.

(f) The Executive Director may grant variances from the requirements in this Section upon a written request and a showing by the permittee that the requested variance will:

(1) Not adversely affect the quality of the discharge nor the environment;
(2) Avoid an excessive requirement; and
(3) Not hinder the proper operations of the treatment facility.

[**Source:** Amended at 41 Ok Reg, Number 23, effective 9-15-24; Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 28 Ok Reg 1231, eff 7-1-11]

SUBCHAPTER 13. CLOSURE AND REMEDIATION [REVOKED]

252:606-13-1. Site closure and remediation [REVOKED]

[**Source:** Added at 21 Ok Reg 1584, eff 6-11-04; Revoked at 28 Ok Reg 1231, eff 7-1-11]

APPENDIX A. Minimum Control Test for Wastewater Treatment Facilities

APPENDIX A. MINIMUM CONTROL TEST FOR WASTEWATER TREATMENT FACILITIES

A facility must perform the minimum control tests for all processes which it utilizes. For example, a trickling filter facility which has an anaerobic digester must comply with Tables 1-2, 1-5 and 1-6. OAC 252:606-11-3 and OAC 252:606-11-5 contains stream monitoring requirements. All facilities which discharge must perform these tests.

The following abbreviations, definitions and notations are used:

DO -Dissolved Oxygen
BOD_5 -Five–day biochemical oxygen demand
TSS -Total Suspended Solids
SAR -Sodium absorption ratio
2/wk -Two times each week
3/wk -Three times each week
5/wk -Five times each week
7/wk -Seven times each week
Daily -Each day

3 hr comp - A composite sample collected over a three hour period of time and consisting of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.

6 hr comp - A composite sample collected over a six hour period of time and consisting of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.

12 hr comp - A composite sample collected over a twelve hour period of time and consisting of twelve effluent portions collected no closer together than one hour and composited according to flow.

Grab sample -An individual sample collected in less than 15 minutes.

Sequential Batch Reactor (SBR) Composite Sample[1]

SBR Sample -A minimum of three aliquots collected from the discharge of a reactor. The first aliquot must be collected no later than 1/4 time, the second approximately 1/2 time, and the third no earlier than 3/4 time from the initiation of a discharge cycle to the stoppage of the discharge cycle. The three aliquots must consist of equal portions unless the rate of discharge from the reactor varies significantly during the cycle, in which case aliquots must be proportional to the measurement of the flow occurring at the time of their collection.

Single Composite SBR Sample	-One SBR sample collected from each reactor during one discharge cycle and composited proportional to the volume discharged from each of the reactors. The sample from at least one of the reactors must represent the expected period of peak influent organic loading.
Two-Cycle Composite SBR Sample	-One SBR sample collected from two consecutive discharge cycles of each reactor and composited proportional to the volume discharged during each cycle of each reactor. The sample from at least one cycle must represent the expected period of peak influent organic loading.
Three-Cycle Composite SBR Sample	-One SBR sample collected from three consecutive discharge cycles of each reactor and composited proportional to the volume discharged during each cycle of each reactor. The sample from at least one cycle must represent the expected period of peak influent organic loading.

Example of a Single Composite SBR Sample

(Two-cycle and three-cycle composited SBR samples are multiples of these composited proportional to the volume discharged in each cycle).

[This example assumes an SBR plant with three reactors.]

Aeration Basin (Reactor) #1	A-1 A-2 A-3	S-1	Proportional to Volume Discharged	
Aeration Basin (Reactor) #2	A-1 A-2 A-3	S-2	Proportional to Volume Discharged	CS
Aeration Basin (Reactor) #3	A-1 A-2 A-3	S-3	Proportional to Volume Discharged	

A-1 = 1st Aliquot
A-2 = 2nd Aliquot
A-3 = 3rd Aliquot

(A-1) + (A-2) + (A-3) = S-_

S-1 = SBR Sample from Reactor #1
S-2 = SBR Sample from Reactor #2
S-3 = SBR Sample from Reactor #3

(S-1) + (S-2) + (S-3) = CS

CS = Single Composite SBR Sample

Depending on design flow, single, two-cycle, or three-cycle SBR Composite Sample results are used for reporting purposes on discharge monitoring reports.

TABLE 1-1 Discharging Lagoons[1]

Parameters & Sample Site	Design Capacity (MGD) 0 - <0.1	0.1 - <0.5	0.5 - <1.0	1.0 - <5.0	5.0 - <10.0	>10.0
pH-each cell & effluent	2/wk	2/wk	2/wk	2/wk	2/wk	2/wk
DO-each cell & effluent	2/wk	2/wk	2/wk	2/wk	2/wk	2/wk
Alkalinity-each cell & effluent	2/wk	2/wk	2/wk	2/wk	2/wk	2/wk
Temperature-each cell & Effluent	2/wk	2/wk	2/wk	2/wk	2/wk	2/wk
Fecal Indicator Bacteria- effluent, if treatment process includes disinfection	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk
Chlorine Residual-effluent, if treatment process includes chlorination	Daily	Daily	Daily	Daily	Daily	Daily
Flow-effluent	2/wk Instantaneous	5/wk Instantaneous	7/wk Totalized	7/wk Totalized	7/wk Totalized	7/wk Totalized
BOD_5-influent & effluent	1/mo grab	2/mo grab	3/mo 3 hr comp	1/wk 6 hr comp	5/wk 12 hr comp	7/wk 12 hr comp
TSS-effluent	1/mo grab	2/mo grab	3/mo 3 hr comp	1/wk 6 hr comp	5/wk 12 hr comp	7/wk 12 hr comp
Appearance of effluent	2/wk	2/wk	2/wk	2/wk	2/wk	2/wk

[1] For industrial discharging facilities, the control tests listed above only apply to discharging lagoon systems that contain permit limits for oxygen demanding substances if the control test and the parameter listed in the permit are the same. In lieu of the requirements in the above table, industrial facilities may follow a site-specific plan for control tests upon written approval by DEQ. Industrial facilities may develop and use appropriate forms to track process control testing results.

TABLE 1-2
Trickling Filter, Rotating Biological Contactor and Other Attached Growth Plants[1]

	Design Capacity (MGD)					
Parameters & Sample Site	**0 - <0.1**	**0.1 - <0.5**	**0.5 - <1.0**	**1.0 - <5.0**	**5.0 - <10.0**	**>10.0**
pH-each influent & effluent	Daily	Daily	Daily	Daily	Daily	Daily
DO- effluent	Daily	Daily	Daily	Daily	Daily	Daily
Temperature- effluent	Daily	Daily	Daily	Daily	Daily	Daily
Settlement Solids-influent	Daily	Daily	Daily	Daily	Daily	Daily
Flow	Daily	Daily	Daily	Daily	Daily	Daily
BOD_5-influent & effluent	1/mo grab	2/mo grab	3/mo 3 hr comp	1/wk 6 hr comp	5/wk 12 hr comp	7/wk 12 hr comp
TSS-influent & effluent	1/mo grab	2/mo grab	3/mo 3 hr comp	1/wk 6 hr comp	5/wk 12 hr comp	7/wk 12 hr comp
Fecal Indicator Bacteria – effluent if treatment process includes disinfection	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk
Chlorine Residual (only if Cl is added as part of treatment)	Daily	Daily	Daily	Daily	Daily	Daily

[1]For industrial discharging facilities, the control tests listed above only apply to Trickling Filter, Biological Contactor and other Attached Growth facilities that contain permit limits for oxygen demanding substances if the control test and the parameter listed in the permit are the same. In lieu of the requirements in the above table, industrial facilities may follow a site-specific plan for control tests upon written approval by DEQ. Industrial facilities may develop and use appropriate forms to track process control testing results.

TABLE 1-3 Activated Sludge Facilities (including extended aeration and oxidation ditches and including sequential batch reactors)[1]

Parameters & Sample Site	Design Capacity (MGD) 0 - <0.1	0.1 - <0.5	0.5 - <1.0	1.0 - <5.0	5.0 - <10.0	>10.0
pH-influent & effluent	Daily	Daily	Daily	Daily	Daily	Daily
DO-effluent	Daily	Daily	Daily	Daily	Daily	Daily
Temperature- effluent	Daily	Daily	Daily	Daily	Daily	Daily
Settleable Solids-influent	Daily	Daily	Daily	Daily	Daily	Daily
Flow	Daily	Daily	Daily	Daily	Daily	Daily
BOD_5-influent & effluent	1/mo grab	2/mo grab	3/mo 3 hr comp	1/wk 6 hr comp	5/wk 12 hr comp	7/wk 12 hr comp
TSS-influent & effluent	1/mo grab	2/mo grab	3/mo 3 hr comp	1/wk 6 hr comp	5/wk 12 hr comp	7/wk 12 hr comp
BOD_5 and TSS effluent for SBR Process	1/mo single composite SBR sample	2/mo single composite SBR sample	3/mo single composite SBR sample	1/wk 2-cycle composite SBR sample	5/wk 3-cycle composite SBR sample	7/wk 3-cycle composite SBR sample
Ammonia-influent*	1/mo grab	2/mo grab	3/mo 3 hr comp	1/wk 6 hr comp	5/wk 12 hr comp	7/wk 12 hr comp
Total Phosphorus-influent*	1/mo grab	2/mo grab	3/mo 3 hr comp	1/wk 6 hr comp	5/wk 12 hr comp	7/wk 12 hr comp
Fecal Indicator Bacteria- effluent, if treatment process includes disinfection	1/wk	1/wk	1/wk	1/wk	1/wk	1/wk
Chlorine Residual (if Cl added as part of treatment)	Daily	Daily	Daily	Daily	Daily	Daily
30 minute Settleability-mixed liquor	Daily	Daily	Daily	Daily	Daily	Daily
Sludge Volume index	2/wk	2/wk	3/wk	3/wk	5/wk	7/wk
DO-aeration basins	2/wk	2/wk	3/wk	3/wk	5/wk	7/wk
Waste Activated Sludge Control Tests-select 1, 2, or 3 below- 1. Food Mass 2. Mean Cell 3. Sludge age	As necessary to control operation		3/wk	3/wk	3/wk	3/wk

[1]For industrial discharging facilities, the control tests listed above only apply to discharging activated sludge facilities that contain permit limits for oxygen demanding substances if the control test and the parameter listed in the permit are the same. In lieu of the requirements in the above table, industrial facilities may follow a site-specific plan for control tests upon written approval by DEQ. Industrial facilities may develop and use appropriate forms to track process control testing results.

* Applicable only to permits that contain ammonia and/or phosphorus limits in the months when the permit limit is established.

TABLE 1-4
Aerobic Digestors[1]

Parameters & Sample Site	Design Capacity (MGD) 0 - <0.1	0.1 - <0.5	0.5 - <1.0	1.0 - <5.0	5.0 - <10.0	>10.0
DO-basin contents	2/wk	2/wk	3/wk	5/wk	7/wk	7/wk
pH-basin contents	2/wk	2/wk	3/wk	5/wk	7/wk	7/wk
% Volatile suspended solids destruction	None	None	None	None	3/wk	3/wk
% Solids	None	None	None	when drawn	when drawn	when drawn

[1]For industrial discharging facilities, the control tests listed above only apply to discharging Aerobic Digester facilities that contain permit limits for oxygen demanding substances if the control test and the parameter listed in the permit are the same. In lieu of the requirements in the above table, industrial facilities may follow a site-specific plan for control tests upon written approval by DEQ. Industrial facilities may develop and use appropriate forms to track process control testing results.

TABLE 1-5
Anaerobic Digestors[1]

Parameters & Sample Site	Design Capacity (MGD) 0 - <0.1	0.1 - <0.5	0.5 - <1.0	1.0 - <5.0	5.0 - <10.0	>10.0
pH	1/wk	1/wk	3/wk	5/wk	7/wk	7/wk
Temperature	1/wk	1/wk	3/wk	5/wk	7/wk	7/wk
Volatile Acids	when drawn	when drawn	2/wk	3/wk	3/wk	3/wk
Total Alkalinity	when drawn	when drawn	2/wk	3/wk	3/wk	3/wk
% Volatile suspended solids destruction	None	None	None	None	3/wk	3/wk
% Solids	None	None	when drawn	when drawn	when drawn	when drawn

[1]For industrial discharging facilities, the control tests listed above only apply to discharging Anaerobic Digester facilities that contain permit limits for oxygen demanding substances if the control test and the parameter listed in the permit are the same. In lieu of the requirements in the above table, industrial facilities may follow a site-specific plan for control tests upon written approval by DEQ. Industrial facilities may develop and use appropriate forms to track process control testing results.

[**Source:** Revoked and reenacted at 28 Ok Reg 1231, eff 7-1-11; Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX B. Annual Fees for Non-Industrial Discharge Permits

APPENDIX B. ANNUAL FEES FOR NON-INDUSTRIAL DISCHARGE PERMITS

Annual Fee Rating System – The fees for non-industrial discharge permits will be calculated according to an Annual Fee Rating System as follows:

(1) The system will contain the following factors to evaluate the complexity of the permit:

(a) Discharge complexity level designation

(b) Major/minor facility designation

(c) Actual wastewater flow rate over the previous ~~twelve (12)~~ months

(d) Outfalls

(e) Pretreatment Program.

(2) Points will be calculated for each of the complexity factors listed in paragraph (1) according to the Instructions for completing the annual permit fee rating sheet (Table G-1) and the annual fee rating work sheet (Table G-2).

(3) The total annual fee is calculated by adding the annual discharge fee and the annual pretreatment fee. The annual discharge fee will be calculated by multiplying the total number of points generated using **Table B-2 items 1-5** beginning July 1, 2011 by $43.40; and beginning July 1, 2012 by $50.70. The annual pretreatment fee will be calculated by multiplying the total number of points generated using **Table B-2 item 6** beginning July 1, 2011 by $42.57; and beginning July 1, 2012 by $49.87.

(4) Fees for other disposal methods will be in addition to the fees for discharge and will be in accordance with other applicable rules of DEQ.

(5) The annual fee will be paid in advance by all facilities which have a permit in effect as of June 30 of each year. Fees in excess of $1,000 may be paid quarterly upon the request of the permittee.

(6) The first year fee for new facilities will be calculated according to the Annual Fee Rating System. Complexity factors based on operational levels at the facility will be calculated using levels proposed in the application. The first year fee for new facilities will be prorated and will cover the period beginning the issuance date of the permit and ending June 30th of the coinciding fiscal year. A statement of the first year fee will be mailed to the applicant with the permit and will be due within 20 days of receipt.

(7) A statement of fees due will be mailed to the permittee at the beginning of each fiscal year (July 1).

(8) Fees not received by the due date will be subject to an additional fee of ten percent (10%) of the fee set forth in the statement.

(9) If the fees have not been received by DEQ within 15 days after the due date set forth in the statement, the permit will be subject to revocation after notice and opportunity for hearing.

(10) Fee payment must be made by check, draft, or money order payable to the Oklahoma Department of Environmental Quality and mailed or hand delivered to DEQ.

(11) State appropriations and federal grants will be used to offset the annual fee where possible.

(12) To assist DEQ in meeting rising costs to the OPDES program associated with permitting and enforcement for non-industrial discharge permits, the fees set out in this Appendix shall be automatically adjusted on July 1st every year to correspond to the percentage, if any, by which the Consumer Price Index (CPI) for the most recent calendar year exceeds the CPI for the previous calendar year. DEQ may round the adjusted fees up to the nearest dollar. DEQ may waive collection of an automatic increase in a given year if it determines other revenues, including appropriated state general revenue funds, have increased sufficiently to make the funds generated by the automatic adjustment unnecessary in that year. A waiver does not affect future automatic adjustments.

(a) Any automatic fee adjustment under this subsection may be averted or eliminated, or the adjustment percentage may be modified, by rule promulgated pursuant to the Oklahoma Administrative Procedures Act. The rulemaking process may be initiated in any manner provided by law, including a petition for rulemaking pursuant to 75 O.S. § 305 and OAC 252:4-5-3 by any person affected by the automatic fee adjustment.

(b) If the United States Department of Labor ceases to publish the CPI or revises the methodology or base years, no further automatic fee adjustments shall occur until a new automatic fee adjustment rule is promulgated pursuant to the Oklahoma Administrative Procedures Act.

(c) For purposes of this subsection, "Consumer Price Index" or "CPI" means the Consumer Price Index - All Urban Consumers (U.S. All Items, Current Series, 1982-1984=100, CUUR0000SA0) published by the United States Department of Labor. The CPI for a calendar year is the figure denoted by the Department of Labor as the "Annual" index figure for that calendar year.

(13) The fees listed in this Appendix shall only be raised in the manner stated in paragraph (12) above, unless a workload and budget analysis is completed, which demonstrates that an additional increase in fees is warranted.

TABLE B-1
INSTRUCTIONS FOR COMPLETING NON-INDUSTRIAL DISCHARGE PERMIT ANNUAL FEE RATING WORK SHEET
(For Staff Use)

1. DISCHARGE COMPLEXITY LEVEL DESIGNATION

From the permit application and permit, determine the appropriate Standard Industrial Classification (SIC) codes for each discharge point by determining the processes and products reported for the facility for sewage treatment plants (SIC 4952), check complexity designation level 1. For other non-industrial discharges, use the latest available edition of Table 1 or 2 from the U.S. Environmental Protection Agency NPDES Permit Rating Worksheet "Complexity Groups for SIC Codes" to determine the applicable subcategory and the related complexity designation. When more than one category applies to effluent from a single discharge point, select the category with the highest complexity level designation. Level 1 is the lowest complexity level designation and Level 5 is the highest.

2. MAJOR/MINOR NPDES FACILITY DESIGNATION

Determine if the facility is rated as a major facility according to the latest EPA NPDES Permit Rating System. Check the appropriate answer and record the applicable point amount.

3. WASTEWATER FLOW

On the work sheet under the wastewater flow, indicate the appropriate flow range, based on actual flow rate from the previous 12 months.

4. TRADITIONAL POLLUTANT LOADING

Determine if the permit contains discharge limitations for biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS) and/or ammonia (or nitrogen). Points should be assigned for the parameters limited in the permit. For the purposes of determining permit fees, the daily average load for each parameter will be calculated, based upon the reported values for the parameter and flow rates submitted on self monitoring report (SMR) and/or discharge monitoring report (DMR) forms for the past 12 months.

Calculate the BOD and/or COD daily average loads and record the applicable points for each. In some cases, oxygen demand may be limited by some parameter other than BOD or COD [i.e., ultimate oxygen demand (UOD), total organic carbon (TOC), or total oxygen demand (TOD)]. In such cases, record the alternate parameter in the applicable space and calculate the average load and report the applicable point amount.

Sum the points for each parameter and record the total traditional pollutant points in the space provided.

5. OUTFALLS

On the work sheet under outfalls, indicate the number of outfalls.

6. PRETREATMENT

On the work sheet under pretreatment, indicate whether the applicant implements a DEQ-required/approved pretreatment program.

7. RATING POINTS FOR DISCHARGE

Sum the rating points assigned to each of the four sections and record the total in the discharge rating points blank.

8. DISCHARGE FEE

Multiply the points for discharge by the appropriate $/point as found in section (3) above.

9. RATING POINTS FOR PRETREATMENT

Sum the rating points assigned to the two pretreatment sections and record the total in the pretreatment rating points blank.

10. PRETREATMENT EE F

Multiply the points for pretreatment by the appropriate $/point as found in section (3) above.

11. ANNUAL PERMIT FEE

The annual permit fee will be computed by adding the fee for discharge and the fee for pretreatment.

TABLE B-2
DISCHARGE PERMIT ANNUAL FEE RATING WORK SHEET

PERMIT NO._____

PERMITTEE_____DATE___/___/___

1. DISCHARGE COMPLEXITY DESIGNATION

SELECTED OUTFALL POINT #_____ (with the highest complexity)

SELECTED SIC CODE _____

Complexity Designation Level =
_____ 1 (20 points)
_____ 2 (25 points)
_____ 3 (30 points)
_____ 4 (35 points)
_____ 5 (40 points)

DISCHARGE COMPLEXITY DESIGNATION POINTS_____

2. MAJOR/MINOR NPDES FACILITY DESIGNATION

Is the facility rated as a major facility according to the latest version of the EPA NPDES Permit Rating System?

_____ Yes, then points = 120
_____ No, then points = 12

MAJOR//MINOR FACILITY DESIGNATION POINTS_____

3. WASTEWATER FLOW

FLOW VOLUME _____ (4 points per MGD)

Total points _____

4. TRADITIONAL POLLUTANTS

A. BOD or _____
Daily Average Load =
_____ < 50 lb/day (0 points)
_____ 50 - 500 (5 points)
_____ > 500 - 1000 (10 points)
_____ > 1000 - 3000 (20 points)
_____ > 3000 - 5000 (30 points)
_____ > 5000 lb/day (40 points)

BOD Points _____

B. COD

Daily Average Load =

_____ < 100 lb/day (0 points)
_____ 100 – 500 (5 points)
_____ > 500 – 1000 (10 points)
_____ > 1000 – 5000 (20 points)
_____ > 5000 – 10000 (30 points)
_____ >10000 - lb/day (40 points)

COD Points _____

C. TSS

Daily Average Load =

_____ < 100 lb/day (0 points)
_____ 100 - 500 (5 points)
_____ > 500 - 1000 (10 points)
_____ > 1000 - 5000 (20 points)
_____ > 5000 - 10000 (30 points)
_____ > 10000 lb/day (40 points)

TSS Points _____

D. AMMONIA or _____

Daily Average Load =

_____ < 200 lb/day (0 points)
_____ 200 - 500 (5 points)
_____ > 500 - 1000 (10 points)
_____ >1000 - 5000 (20 points)
_____ >5000 - 10000 (30 points)
_____ >10000 lb/day (40 points)

AMMONIA (or nitrogen) Points _____

TOTAL POLLUTANT POINTS _____

5. OUTFALLS

Number of Outfalls _____ (8 points per outfall over 1, up to 10 outfalls)

Total points _____

6. PRETREATMENT

Does the facility implement a pretreatment program (charged one per city/authority)?

_____ Yes, then points = 80 points + 20 points per MGD x 1/3 (Flow volume) (sum

of flow rates of all facilities operated by the city/authority) _____ + 20 points per categorical user (with a cap of 10) x 2/3

_____ No, then points = 0 points

Total points _____

==========

(A) TOTAL RATING POINTS FROM DISCHARGE CALCULATIONS

(B) $/POINT FROM SECTION (3) ABOVE

(C) **DISCHARGE FEE** = ((A) x (B))

(D) TOTAL RATING POINTS FROM PRETREATMENT CALCULATION

(E) $/POINT FROM SECTION (3) ABOVE

(F) **PRETREATMENT FEE** = ((D) x (E))

(G) **TOTAL FEE** = ((C) + (F))

[**Source:** Revoked and reenacted at 28 Ok Reg 1231, eff 7-1-11; Revoked and reenacted at 25 Ok Reg 2272, eff 7-11-08; Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX C. Annual Industrial Discharge Fees

APPENDIX C. ANNUAL INDUSTRIAL DISCHARGE FEES

Annual Fee Rating System – Fees for industrial discharge permits will be calculated according to an Annual Fee Rating System as follows:

(1) The system will contain the following factors to evaluate the complexity of the permit:

(a) Major/minor facility designation

(b) Discharge complexity level designation

(c) Receiving stream beneficial use designation

(d) Toxic pollutant potential

(e) Traditional pollutant loading

(f) Additional factors

(2) Points will be calculated for each of the complexity factors listed in paragraph (1) according to the instructions for completing annual permit fee rating sheet in Table C-1 and the annual fee rating worksheet (in substantially same form as Table C-2).

(3) The annual fee will be calculated by multiplying the number of points beginning July 1, 2011 by $72.56; beginning July 1, 2012 by $109.56; beginning July 1, 2013 by $142.56; beginning July 1, 2014 by $146.70; and beginning July 1, 2015 by $150.85.

(4) Fees for other disposal methods will be in addition to the fees for discharge and will be in accordance with other applicable rules of DEQ.

(5) The annual fee will be paid in advance by all facilities which have a permit in effect as of June 30th of each year.

(6) The first year fee for new facilities will be calculated according to the Annual Fee Rating System. Complexity factors based on operational levels at the facility will be calculated using levels proposed in the application. The first year fee for new facilities will be prorated and covers the period beginning the issuance date of the permit and ending June 30th of the coinciding fiscal year. A statement of the first year fee will be mailed to the applicant within 10 days of receipt of application and will be due within 20 days of receipt of application.

(7) A statement of fees due will be mailed to the permittee on or as soon as practical after July 1 of each year.

(8) State appropriations and federal grants will be used to offset the annual fee where possible.

(9) The dollar value per point in paragraph (3) above will continue in effect unless a workload and budget analysis is performed in the previous fiscal year justifying that a fee increase is necessary. This analysis must be reviewed and approved by the Environmental Quality Board.

(10) To assist DEQ in meeting rising costs to the OPDES program associated with permitting and enforcement for industrial discharge permits, the fees set out in this Appendix shall be automatically adjusted on July 1st every year to correspond to the percentage, if any, by which the Consumer Price Index (CPI) for the most recent calendar year exceeds the CPI for the previous calendar year. DEQ may round the adjusted fees up to the nearest dollar. DEQ may waive collection of an automatic increase in a given year if it determines other revenues, including appropriated state general revenue funds, have increased sufficiently to make the funds generated by the automatic adjustment unnecessary in that year. A waiver does not affect future automatic adjustments.

(a) Any automatic fee adjustment under this subsection may be averted or eliminated, or the adjustment percentage may be modified, by rule promulgated pursuant to the Oklahoma Administrative Procedures Act. The rulemaking process may be initiated in any manner provided by law, including a petition for rulemaking pursuant to 75 O.S. § 305 and OAC 252:4-5-3 by any person affected by the automatic fee adjustment.

(b) If the United States Department of Labor ceases to publish the CPI or revises the methodology or base years, no further automatic fee adjustments shall occur until a new automatic fee adjustment rule is promulgated pursuant to the Oklahoma Administrative Procedures Act.

(c) For purposes of this subsection, "Consumer Price Index" or "CPI" means the Consumer Price Index - All Urban Consumers (U.S. All Items, Current Series, 1982-1984=100, CUUR0000SA0) published by the United States Department of Labor. The CPI for a calendar year is the figure denoted by the Department of Labor as the "Annual" index figure for that calendar year.

(11) The fees listed in this Appendix shall only be raised in the manner stated in paragraph (10) above, unless a workload and budget analysis is completed, which demonstrates that an additional increase in fees is warranted.

(b) If the United States Department of Labor ceases to publish the CPI or revises the methodology or base years, no further automatic fee adjustments shall occur until a new automatic fee adjustment rule is promulgated pursuant to the Oklahoma Administrative Procedures Act.

(c) For purposes of this subsection, "Consumer Price Index" or "CPI" means the Consumer Price Index - All Urban Consumers (U.S. All Items, Current Series, 1982-1984=100, CUUR0000SA0) published by the United States Department of Labor. The CPI for a calendar year is the figure denoted by the Department of Labor as the "Annual" index figure for that calendar year.

(11) The fees listed in this Appendix shall only be raised in the manner stated in paragraph (10) above, unless a workload and budget analysis is completed, which demonstrates that an additional increase in fees is warranted.

Determine if the permit contains discharge limitations for biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS) and/or ammonia (or nitrogen). Points should be assigned for the parameters limited in the permit. For the purposes of determining permit fees, the daily average load for each parameter will be calculated, based upon the reported values for the parameter and flow rates submitted on self monitoring report (SMR) and/or discharge monitoring report (DMR) forms for the past 12 months.

Calculate the BOD and/or COD daily average loads and record the applicable points for each. In some cases, oxygen demand may be limited by some parameter other than BOD or COD [i.e., ultimate oxygen demand (UOD), total organic carbon (TOC), or total oxygen demand (TOD)]. In such cases, record the alternate parameter in the applicable space and calculate the average load and report the applicable point amount. Sum the points for each parameter and record the total traditional pollutant points in the space provided.

7. ADDITIONAL FACTORS

Determine if the permitted effluent limitations were assigned based on dissolved oxygen (DO) wasteload allocation modeling, including but not limited to the DO Desktop Model, for the receiving perennial stream. Check the appropriate answer and record the points required.

Determine if any permitted effluent limitations were assigned based on a wasteload allocation modeling for conservative parameters. Check the appropriate answer and record the points required.

Determine if biomonitoring is required for any discharge point listed on the permit. Check the appropriate answer and record the points required.

Determine if the facility has had whole effluent toxicity studies performed within the last two years. If so, determine if the results of any of those tests indicated that the effluent from this facility is/was toxic at the critical low-flow dilution. Check the appropriate answer and record the points required.

Determine if the facility is currently required by the U.S. Environmental Protection Agency or DEQ to implement a Toxicity Identification Evaluation (TIE) or Toxicity Reduction Evaluation (TRE). Check the appropriate answer and record the points required.

8. TOTAL RATING POINTS

Sum the rating points assigned to each of the five sections and record the total in the total rating points blank.

9. ANNUAL PERMIT FEE

The annual permit fee will be computed by multiplying the rating factor (in $ per point) by the calculated total rating points plus the base fee rate.

TABLE C-2
INDUSTRIAL DISCHARGE PERMIT ANNUAL FEE RATING WORKSHEET

PERMIT NO._____

PERMITTEE_____DATE___/___/___

1. MAJOR/MINOR DETERMINATION

Is the facility rated as a major facility according to the latest version of the EPA NPDES Non-Municipal Permit Rating System?

_____ Yes, then $3000 is the base fee

_____ No, then:

- $2,000.00 for a "complex minor," which is defined as a minor industrial discharger who either has pH limit outside the 6.5 to 9.0 range, reasonable potential calculations with or without technology-based limits, any impoundments that meet the Class I or Class II definition contained in OAC 252:616, land applies wastewater, or implements site-specific criteria;

- $1,000.00 for a "intermediate minor," which is defined as a minor system that meets one of the following: more than two outfalls, discharges to a 303 (d) listed stream, or has technology-based effluent limitations other than TSS, oil and grease, or pH;

- $300 for all other minor systems.

2. DISCHARGE COMPLEXITY DESIGNATION

SELECTED OUTFALL POINT #_____ (with the highest complexity)

SELECTED SIC CODE _____

Complexity Designation Level =

_____ I (0 points)
_____ II (10 points)
_____ III (20 points)
_____ IV (30 points)
_____ V (40 points)
_____ VI (20 points)

DISCHARGE COMPLEXITY DESIGNATION POINTS_____

3. RECEIVING STREAM BENEFICIAL USE DESIGNATION

Selected Discharge Point #_____ (with the highest points)

Beneficial Use Designations and their assigned points for the selected Receiving Stream:
_____ (5 points) Public and Private Water Supply

_____ (3 points) Emergency Public and Private Water Supply
_____ (5 points) Fish and Wildlife Propagation/Warm Water Aquatic Community
_____ (1 point) Fish and Wildlife Propagation/Habitat Limited Aquatic Community
_____ (10 points) Fish and Wildlife Propagation/Cool Water Aquatic Community
_____ (10 points) Fish and Wildlife Propagation/Trout Fisheries (put and take)
_____ (1 point) Agriculture
_____ (3 points) Agriculture/Class I Irrigation
_____ (2 points) Agriculture/Class II Irrigation
_____ (1 point) Agriculture/Class III Irrigation
_____ (0 points) Hydroelectric Power
_____ (1 point) Industrial and Municipal Process and Cooling Water
_____ (5 points) Primary Body Contact Recreation
_____ (1 point) Secondary Body Contact Recreation
_____ (0 points) Navigation
_____ (1 point) Aesthetics
_____ (10 points) Limitation for Additional Protection

RECEIVING STREAM POINTS_____

4. TOXIC POLLUTANT POTENTIAL

Selected Outfall Point #_____ (with highest Total toxicity number)
Selected SIC Code _____
Selected Industrial Subcategory Code _____

Toxicity Groups	**Points**
No Process Waste Stream	0
_____ 1.	5
_____ 2.	10
_____ 3.	15
_____ 4.	20
_____ 5.	25
_____ 6.	30
_____ 7.	35
_____ 8.	40
_____ 9.	45
_____ 10.	50

TOXIC POLLUTANT POTENTIAL POINTS_____

5. TRADITIONAL POLLUTANTS

A. BOD or _____
Daily Average Load =
_____ < 50 lb/day (0 points)

_____ 50 - 500 (5 points)
_____ > 500 - 1000 (10 points)
_____ >1000 - 3000 (20 points)
_____ >3000 - 5000 (30 points)
_____ >5000 lb/day (40 points)

BOD Points _____

B. COD

Daily Average Load =

_____ < 100 lb/day (0 points)
_____ 100 – 500 (5 points)
_____ > 500 – 1000 (10 points)
_____ > 1000 – 5000 (20 points)
_____ > 5000 – 10000 (30 points)
_____ >10000 - lb/day (40 points)

COD Points _____

C. TSS

Daily Average Load =

_____ < 100 lb/day (0 points)
_____ 100 - 500 (5 points)
_____ > 500 - 1000 (10 points)
_____ > 1000 - 5000 (20 points)
_____ > 5000 - 10000 (30 points)
_____ >10000 lb/day (40 points)

TSS Points _____

D. AMMONIA or _____

Daily Average Load =

_____ < 200 lb/day (0 points)
_____ 200 - 500 (5 points)
_____ > 500 - 1000 (10 points)
_____ >1000 - 5000 (20 points)
_____ >5000 - 10000 (30 points)
_____ >10000 lb/day (40 points)

AMMONIA (or nitrogen) Points _____

TOTAL POLLUTANT POINTS _____

6. ADDITIONAL FACTORS

Were any of the effluent limitations assigned to the discharge based on DO related wasteload allocation modeling for the receiving perennial stream?

_____ Yes, then points = 5

_____ No, then points = 0

Were any of the effluent limitations assigned to the discharge based on a wasteload allocation modeling for conservative parameters?

_____ Yes, then points = 5
_____ No, then points = 0

Is biomonitoring required for any discharge point listed on the permits?

_____ Yes, then points = 10
_____ No, then points = 0

Has any effluent from the facility shown toxicity at the critical low flow

_____ Yes, then points = 25
_____ No, then points = 0

Is the facility currently required by the U.S. Environmental Protection Agency or DEQ to implement a Toxicity Identification Evaluation (TIE) or a Toxicity Reduction Evaluation (TRE)?

_____ Yes, then points = 100
_____ No, then points = 0

ADDITIONAL FACTORS POINTS_____

==========

(A) BASE FEE $

(B) RATING FACTOR ($_____/point)

(C) TOTAL RATING POINTS_____

(D) TOTAL AMOUNT DUE (A) + ((B) X (C)) $

[**Source:** Revoked and reenacted at 28 Ok Reg 1231, eff 7-1-11; Revoked and reenacted at 25 Ok Reg 2272, eff 7-11-08; Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX D. Fees for Stormwater Permits and Other General Permits [REVOKED]

[**Source:** Revoked at 31 Ok Reg 1292, eff 9-12-14; Revoked and reenacted at 28 Ok Reg 1231, eff 7-1-11; Revoked and reenacted at 25 Ok Reg 2272, eff 7-11-08; Added at 21 Ok Reg 1584, eff 6-11-04]

APPENDIX E. Fees for Industrial Users

Figure 1

APPENDIX E. FEES FOR INDUSTRIAL USERS

(A) The fee for industrial users discharging to non-pretreatment Publicly Owned Treatment Works (POTWs) will be as follows: beginning July 1, 2011, $1,100.00; beginning July 1, 2012, $1,920.00; beginning July 1, 2013, $4,150.00; beginning July 1, 2014, $4,200.00; beginning July 1, 2015 and thereafter, $4,270.00.

(B) Fee payment must be made by check, draft, or money order payable to the Oklahoma Department of Environmental Quality and mailed or hand delivered to DEQ.

(C) The annual fee must be paid in advance by all facilities which have a permit in effect as of June 30 of each year.

(D) The first year fee for facilities will be prorated and will cover the period beginning the issuance date of the permit and ending June 30th of the coinciding fiscal year. A statement of the first year fee will be mailed to the applicant within 10 days of receipt of application and will be due within 20 days of receipt of application.

(E) A statement of fees due will be mailed to the permittee at the beginning of each fiscal year (July 1).

(F) Fees not received by the due date will be subject to an additional fee of ten percent (10%) of the fee set forth in the statement.

(G) If the fees have not been received by DEQ within 15 days after the due date set forth in the statement, the permit will be subject to revocation after notice and opportunity for hearing.

(H) State appropriations and federal grants will be used to offset the annual fee where possible.

(I) To assist DEQ in meeting rising costs to the OPDES program associated with permitting and enforcement for industrial users discharging to nonpretreatment POTWs, the fees set out in this Appendix shall be automatically adjusted on July 1st every year to correspond to the percentage, if any, by which the Consumer Price Index (CPI) for the most recent calendar year exceeds the CPI for the previous calendar year. DEQ may round the adjusted fees up to the nearest dollar. DEQ may waive collection of an automatic increase in a given year if it determines other revenues, including appropriated state general revenue funds, have increased sufficiently to make the funds generated by the automatic adjustment unnecessary in that year. A waiver does not affect future automatic adjustments.

(1) Any automatic fee adjustment under this subsection may be averted or eliminated, or the adjustment percentage may be modified, by rule promulgated pursuant to the Oklahoma Administrative Procedures Act. The rulemaking process may be initiated in any manner provided by law, including a petition for rulemaking pursuant to 75 O.S. § 305 and OAC 252:4-5-3 by any person affected by the automatic fee adjustment.

(2) If the United States Department of Labor ceases to publish the CPI or revises the methodology or base years, no further automatic fee adjustments shall occur until a new automatic fee adjustment rule is promulgated pursuant to the Oklahoma Administrative Procedures Act.

(3) For purposes of this subsection, "Consumer Price Index" or "CPI" means the Consumer Price Index - All Urban Consumers (U.S. All Items, Current Series, 1982-1984=100, CUUR0000SA0) published by the United States Department of Labor. The CPI for a calendar year is the figure denoted by the Department of Labor as the "Annual" index figure for that calendar year.

(J) The fees listed in this Appendix shall only be raised in the manner stated in paragraph (I) above, unless a workload and budget analysis is completed, which demonstrates that an additional increase in fees is warranted.

[**Source:** Revoked and reenacted at 25 Ok Reg 2272, eff 7-11-08; Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX F. Fees for Land Application of Biosolids

(a) Beginning July 1, 2008, the annual permit fee is:

(1) Population Range 0-100 - $261.00

(2) Population Range 101-500 - $292.00

(3) Population Range 501-1,000 - $509.00

(4) Population Range 1,001-5,000 - $881.00

(5) Population Range 5,001+ - $1,005.00

(b) Fees are due upon receipt of an invoice mailed by DEQ annually. Upon payment of the annual fee, the permit will continue in effect for one year but in no case past its expiration. Failure to pay the fee may result in the suspension or termination of the permit.

(c) Financial assurance

(1) If the applicant is not a city, town or other public entity, the applicant must submit the following information to DEQ:

(A) Expected costs for operation and maintenance, replacement and closure;

(B) Continued existence and financial accountability; and that

(C) Assurance that provisions have been made for continued existence of the operating entity for the expected life of the facility.

(2) Continued existence may be demonstrated in one of the following fashions:

(A) The applicant may be a property owners association or a nonprofit corporation established under the laws of the State of Oklahoma. The association must have the legal authority to own and manage the land application system including the authority to set and collect fees from users for operation and maintenance of the system. The bylaws of the entity must contain a provision that dissolution cannot occur until the system is either closed in accordance with applicable DEQ rules or transferred to another viable operating entity. The instrument creating the association must be filed in the office of the county clerk where the property is located; or

(B) The applicant must provide proof of a sufficient amount on deposit to the credit of a trust, the powers of which are to operate and maintain the wastewater system for the expected life of the facility; or

(C) Other proof of financial viability, such as the issuance of a bond or insurance contract covering the operation and maintenance of the wastewater system for the life of the system may be submitted to DEQ for approval; and

(3) Costs for closure of the wastewater system as required by law must be included in any funding plan.

(4) If the information fails to demonstrate the on-going viability of the operation, the application will be denied.

(d) To assist DEQ in meeting rising costs to the OPDES program associated with the land application of biosolids, the fees set out in this Appendix shall be automatically adjusted on July 1st every year to correspond to the percentage, if any, by which the Consumer Price Index (CPI) for the most recent calendar year exceeds the CPI for the previous calendar year. DEQ may round the adjusted fees up to the nearest dollar. DEQ may waive collection of an automatic increase in a given year if it determines other revenues, including appropriated state general revenue funds, have increased sufficiently to make the funds generated by the automatic adjustment unnecessary in that year. A waiver does not affect future automatic adjustments.

(1) Any automatic fee adjustment under this subsection may be averted or eliminated, or the adjustment percentage may be modified, by rule promulgated pursuant to the Oklahoma

Administrative Procedures Act. The rulemaking process may be initiated in any manner provided by law, including a petition for rulemaking pursuant to 75 O.S. § 305 and OAC 252:4-5-3 by any person affected by the automatic fee adjustment.

(2) If the United States Department of Labor ceases to publish the CPI or revises the methodology or base years, no further automatic fee adjustments shall occur until a new automatic fee adjustment rule is promulgated pursuant to the Oklahoma Administrative Procedures Act.

(3) For purposes of this subsection, "Consumer Price Index" or “"CPI" means the Consumer Price Index - All Urban Consumers (U.S. All Items, Current Series, 1982-1984=100, CUUR0000SA0) published by the United States Department of Labor. The CPI for a calendar year is the figure denoted by the Department of Labor as the "Annual" index figure for that calendar year.

(e) The fees listed in this Appendix shall only be raised in the manner stated in paragraph (d) above, unless a workload and budget analysis is completed, which demonstrates that an additional increase in fees is warranted.

[**Source:** Revoked and reenacted at 25 Ok Reg 2272, eff 7-11-08; Added at 21 Ok Reg 1584, eff 6-11-04; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX G. Monitoring Frequencies for Backwash Discharge From Potable Water Treatment Facilities

Figure 1

APPENDIX G: MONITORING FREQUENCIES FOR BACKWASH DISCHARGE FROM POTABLE WATER TREATMENT FACILITIES

Effluent Parameter[1]	Flow (MGD)					
	0 – <0.1	0.1 - <0.5	0.5 - <1.0	1.0 - <5.0	5.0 - <10.0	>=10
Flow	2/week Instantaneous	5/week Instantaneous	Daily Totalized	Daily Totalized	Daily Totalized	Daily Totalized
TSS	1/month Grab	2/month Grab	3/month Grab	1/week Grab	5/week Grab	7/week Grab
Fe, Dissolved[2]	1/month Grab	1/month Grab	1/month Grab	2/month Grab	2/month Grab	2/month Grab
Al, Dissolved[2]	1/month Grab	1/month Grab	1/month Grab	2/month Grab	2/month Grab	2/month Grab
Mn, Dissolved[2]	1/month Grab	1/month Grab	1/month Grab	2/month Grab	2/month Grab	2/month Grab
pH	2/week Grab	2/week Grab	2/week Grab	2/week Grab	2/week Grab	2/week Grab

[1]Additional parameters may be required to be monitored in accordance with frequencies specified in this Chapter for reverse osmosis, microfiltration, nanofiltration, ion exchange, electro dialysis, and other advanced technologies.
[2]Parameters to be monitored only for conventional water treatment plants.

[**Source:** Added at 31 Ok Reg 1292, eff 9-12-14; Amended at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX H. PRIORITY AND NONPRIORITY POLLUTANTS WITH NUMERICAL CRITERIA REQUIRING REASONABLE POTENTIAL SCREENING

The priority pollutants are listed in Table H-1. Those having state numerical criteria or federal numerical guidelines for the consumption of fish flesh (re: NRWQC), and which require reasonable potential screening if present in an effluent are marked with a diamond (♦). Pollutants with state numerical criteria are indicated according to type of criteria. Pollutants which have NRWQC human health/fish flesh guidelines are screened only if the Fish Consumption beneficial use applies to the discharge and there is no state criterion for the pollutant. Predicted exceedances of NRWQC guidelines will result in effluent and/or background monitoring. Nonpriority pollutants with state and federal criteria are listed in Table H-2. WET testing parameters and their STORET numbers are listed in Table H-3.

Table H-1. Priority Pollutants with State Water Quality Criteria or National Recommended Water Quality Criteria Requiring Reasonable Potential Screening

	Pollutant	CAS No.	STORET No.	MQL (µg/L)	NRWQC Human Health[1]	State Criteria[2]			
						Aquatic Toxicity	Human Health	Raw Water	Agriculture
Metals, Cyanide and Total Phenols	Antimony, total	7440360	01097	60	♦	---	---	---	---
	Arsenic, total	7440382	01002	0.5	♦	♦	♦	♦	---
	Beryllium, total	7440417	01012	5	---	---	---	---	---
	Cadmium, total	7440439	01027	1	---	♦	♦	♦	---
	Chromium, total	7440473	01034	10	---	♦	♦	♦	---
	Chromium (3+)	16065831	01033	10					
	Chromium (6+)	18540299	01032	10					
	Copper, total	7440508	01042	1	♦	♦	---	♦	---
	Lead, total	7439921	01051	0.5	---	♦	♦	♦	---
	Mercury, total	7439976	71900	0.05	♦	♦	♦	♦	---
	Nickel, total	7440020	01067	10	♦	♦	♦	---	---
	Selenium, total	7782492	01147	5	♦	♦	---	♦	---
	Silver, total	7440224	01077	0.5	---	♦	♦	♦	---
	Thallium, total	7440280	01059	0.5	♦	♦	♦	---	---
	Zinc, total	7440666	01092	20	♦	♦	---	♦	---
	Cyanide, total	57125	00720	10	♦	♦	---	♦	---
	Phenols, total	108952	46000	10	---	---	♦	---	---
	2,3,7,8-Tetrachlorodibenzo-p Dioxin	1746016	34675	0.00001	♦	---	♦	---	---

[1] From National Recommended Water Quality Criteria, Pub. No. EPA 822-Z-99-001, April 1999
[2] DEQ-adopted numerical water quality criteria, OAC 252:730, Subchapter 5

Table H-1 (continued). Priority Pollutants with State Water Quality Criteria or National Recommended Water Quality Criteria Requiring Reasonable Potential Screening

	Pollutant	CAS No.	STORET No.	MQL (µg/L)	NRWQC Human Health[1]	State Criteria[2]			
						Aquatic Toxicity	Human Health	Raw Water	Agriculture
Volatile Organics	Acrolein	107028	34210	50	◆	---	◆	---	---
	Acrylonitrile	107131	34215	50	◆	◆	◆	---	---
	Benzene	71432	34030	10	◆	◆	◆	---	---
	Bromoform	75252	32104	10	◆	---	---	---	---
	Carbon Tetrachloride	56235	32102	10	◆	---	◆	---	---
	Chlorobenzene	108907	34301	10	◆	---	---	---	---
	Chlorodibromomethane	124481	32105	10	◆	---	---	---	---
	Chloroethane	75003	34311	50	---	---	---	---	---
	2-Chloroethylvinyl ether	110758	34576	10	---	---	---	---	---
	Chloroform	67663	32106	10	◆	---	◆	---	---
	Dichlorobromomethane	75274	32101	10	◆	---	◆	---	---
	1,1-Dichloroethane	75343	34496	10	---	---	---	---	---
	1,2-Dichloroethane	107062	34536	10	◆	---	---	---	---
	1,1-Dichloroethylene	75354	34501	10	◆	---	---	---	---
	1,2-Dichloropropane	78875	34541	10	◆	---	---	---	---
	1,3-Dichloropropylene	542756	34561	10	◆	---	---	---	---
	Ethylbenzene	100414	34371	10	◆	---	◆	---	---
	Methyl bromide [Bromomethane]	74839	34413	50	◆	---	---	---	---
	Methyl chloride [Chloromethane]	74873	34418	50	---	---	---	---	---
	Methylene chloride	75092	34423	20	◆	---	---	---	---
	1,1,2,2-Tetrachloroethane	79345	34516	10	◆	---	---	---	---
	Tetrachloroethylene	127184	34475	10	◆	◆	◆	---	---
	Toluene	108883	34010	10	◆	◆	◆	---	---
	1,2-Trans-dichloroethylene	156605	34546	10	◆	---	---	---	---
	1,1,1-Trichloroethane [1-1-1 TCE]	71556	34506	10	---	---	◆	---	---
	1,1,2-Trichloroethane	79005	34511	10	◆	---	---	---	---
	Trichloroethylene	79016	39180	10	◆				
	Vinyl chloride	75014	39175	10	◆	---	---	---	---

[1] From National Recommended Water Quality Criteria, Publication No. EPA 822-Z-99-001, April 1999
[2] DEQ-adopted numerical water quality criteria, OAC 252:730, Subchapter 5

Table H-1 (continued). Priority Pollutants with State Water Quality Criteria or National Recommended Water Quality Criteria Requiring Reasonable Potential Screening

	Pollutant	CAS No.	STORET No.	MQL (mg/L)	NRWQC Human Health[1]	State Criteria[2]			
						Aquatic Toxicity	Human Health	Raw Water	Agriculture
Acid Organics	2-Chlorophenol	95578	34586	20	♦	---	---	---	---
	2,4-Dichlorophenol	120832	34601	20	♦	---	---	---	---
	2,4-Dimethylphenol	105679	34606	20	♦	---	---	---	---
	4,6-Dinitro-o-cresol [2-Methyl-4,6-dinitrophenol]	534521	34657	50	♦	---	---	---	---
	2,4-Dinitrophenol	51285	34616	50	♦	--	---	---	--
	2-Nitrophenol	88755	34591	20	---	---	---	---	---
	4-Nitrophenol	100027	34646	50	---	---	---	---	---
	p-Chloro-m-cresol	59507	34452	20	---	---	---	---	--
	Pentachlorophenol	87865	39032	50	♦	♦	♦	---	---
	Phenol	108952	34694	20	♦	---	---	---	---
	2,4,6-Trichlorophenol	88062	34621	20	♦	---	---	---	---
Base / Neutral Organics	Acenaphthene	83329	34205	20		---	---	---	---
	Acenaphthylene	208968	34200	20	---	---	---	---	---
	Anthracene	120127	34220	20	♦	---	---	---	---
	Benzidine	92875	39120	50	♦	---	---	♦	---
	Benzo(a)anthracene	56553	34526	20	♦	---	---	---	---
	Benzo(a)pyrene	50328	34247	20	♦	---	---	---	---
	Benzo(b)fluoranthene [3,4-Benzofluoranthene]	205992	34230	20	♦	---	---	---	---
	Benzo(ghi)perylene	191242	34521	20	---	---	---	---	---
	Benzo(k)fluoranthene	207089	34242	20	♦	---	---	---	---
	Bis (2-chloroethoxy) methane	111911	34278	20	---	---	---	---	---
	Bis (2-chloroethyl) ether	111444	34273	20	♦	---	---	---	---
	Bis (2-chloroisopropyl) ether	39638329	34283	20	♦	---	---	---	---
	Bis (2-ethylhexyl) phthalate	117817	39100	20	♦	---	♦	---	---
	4-Bromophenyl phenyl ether	101553	34636	20	---	---	---	---	---
	Butylbenzyl phthalate	85687	34292	20	♦	---	♦	♦	---
	2-Chloronaphthalene	91587	34581	20	♦	---	---	---	---
	4-Chlorophenyl phenyl ether	7005723	34631	20	---	---	---	---	---
	Chrysene	218019	34320	20	♦	---	---	---	---
	Dibenzo(a,h)anthracene	53703	34556	20	♦	---	---	---	---
	1,2-Dichlorobenzene	95501	34536	20	♦	---	---	---	---
	1,3-Dichlorobenzene	541731	34566	20	♦	---	---	---	---

[1] From National Recommended Water Quality Criteria, Publication No. EPA 822-Z-99-001, April 1999
[2] DEQ-adopted numerical water quality criteria, OAC 252:730, Subchapter 5

Table H-1 (continued). Priority Pollutants with State Water Quality Criteria or National Recommended Water Quality Criteria Requiring Reasonable Potential Screening

	Pollutant	CAS No.	STORET No.	MQL (µg/L)	NRWQC Human Health[1]	State Criteria[2]			
						Aquatic Toxicity	Human Health	Raw Water	Agriculture
Base / Neutral Organics	1,4-Dichlorobenzene	106467	34571	20	♦	---	---	---	---
	3,3'-Dichlorobenzidine	91941	34631	20	♦	---	---	---	---
	Diethyl phthalate	84662	34336	20	♦	---	♦	---	---
	Dimethyl phthalate	131113	34341	20	♦	---	♦	---	---
	Di-n-butyl phthalate	84742	39110	20	♦	---	♦	---	---
	2,4-Dinitrotoluene	121142	34611	20	♦	---	---	---	---
	2,6-Dinitrotoluene	606202	34626	20	---	---	---	---	---
	Di-n-octyl phthalate	117840	34596	20	---	---	---	---	---
	1,2-Diphenylhydrazine (as Azobenzene)	122667	34346	20	♦	---	---	---	---
	Fluoranthene	206440	34376	20	♦	---	---	---	---
	Fluorene	86737	34381	20	♦	---	---	---	---
	Hexachlorobenzene	118741	39700	10	♦	---	♦	---	---
	Hexachlorobutadiene	87683	34391	20	♦	---	---	---	---
	Hexachlorocyclopentadiene	77474	34386	20	♦	---	---	---	---
	Hexachloroethane	67721	34396	20	♦	---	---	---	---
	Ideno (1,2,3-cd) pyrene	193395	34403	20	♦	---	---	---	---
	Isophorone	78591	34408	20	♦	---	---	---	---
	Naphthalene	91203	34696	10	---	---	---	---	---
	Nitrobenzene	98953	34447	20	♦	---	---	---	---
	n-Nitrosodimethylamine	62759	34438	50	♦	---	---	---	---
	n-Nitrosodi-n-propylamine	621647	34428	20	♦	---	---	---	---
	n-Nitrosodiphenylamine	86306	34433	20	♦	---	---	---	---
	Phenanthrene	85018	34461	20	---	---	---	---	---
	Pyrene	129000	34469	20	♦	---	---	---	---
	1,2,4-Trichlorobenzene	120821	34551	20	♦	---	---	---	---
Pesticides	Aldrin	309002	39330	0.05	♦	♦	♦	---	---
	alpha-BHC	319846	39337	0.05	♦	---	---	---	---
	beta-BHC	319857	39338	0.05	♦	---	---	---	---
	gamma-BHC [Lindane]	58899	34266	0.05	♦	♦	♦	♦	---
	delta-BHC	319868	34259	0.05	---	---	---	---	---
	Chlordane	57749	39350	0.2	♦	♦	♦	---	---
	4,4'-DDT	50293	39300	0.05	♦	♦	♦	---	---
	4,4'-DDE	72559	39320	0.05	♦	---	---	---	

[1] From National Recommended Water Quality Criteria, Publication No. EPA 822-Z-99-001, April 1999
[2] DEQ-adopted numerical water quality criteria, OAC 252:730, Subchapter 5

Table H-1 (continued). Priority Pollutants with State Water Quality Criteria or National Recommended Water Quality Criteria Requiring Reasonable Potential Screening

	Pollutant	CAS No.	STORET No.	MQL (µg/L)	NRWQC Human Health[1]	State Criteria[2]			
						Aquatic Toxicity	Human Health	Raw Water	Agriculture
Pesticides	4,4'-DDD	72548	39310	0.05	♦	---	♦	---	---
	Demeton			1					
	Diazinon			1					
	Dieldrin	60571	39380	0.05	♦	♦	♦	---	---
	alpha-Endosulfan	959988	34361	0.05	♦	♦	---	---	---
	beta-Endosulfan	33213659	34356	0.05	♦	♦	---	---	---
	Endosulfan sulfate	1031078	34351	0.05	♦	---	---	---	---
	Endrin	72208	39390	0.05	♦	♦	♦	♦	---
	Endrin aldehyde	7421934	34366	0.05	♦	---	---	---	---
	Heptachlor	76448	39410	0.05	♦	♦	♦	---	---
	Heptachlor epoxide	1024573	39420	0.05	♦	---	---	---	---
	Toxaphene	8001352	39400	0.3	♦	♦	---	♦	---
PCBs	PCB-1242		39496	0.25	---	---	---	---	---
	PCB-1254		39504	0.25	---	---	---	---	---
	PCB-1221		39488	0.25	---	---	---	---	---
	PCB-1232		39492	0.25	---	---	---	---	---
	PCB-1248		39500	0.25	---	---	---	---	---
	PCB-1260		39508	0.25	---	---	---	---	---
	PCB-1016		34671	0.25	---	---	---	---	---
	PCBs, total		04166	0.25	♦	♦	♦	---	---
	2,4,5 – TP (Silvex)			0.25					

[1] From National Recommended Water Quality Criteria, Publication No. EPA 822-Z-99-001, April 1999
[2] DEQ-adopted numerical water quality criteria, OAC 252:730, Subchapter 5

Table H-2. Nonpriority Pollutants with State Water Quality Criteria or National Recommended Water Quality Criteria Requiring Reasonable Potential Screening

	Pollutant	CAS No.	STORET No.	MQL (µg/L)	NRWQC Human Health[1]	State Criteria[2]			
						Aquatic Toxicity	Human Health	Raw Water	Agriculture
Nonpriority Pollutants	Ammonia	7664417	00610	100	---	[3]	---	---	---
	Asbestos	1332214	948	---	♦	---	---	---	---
	Barium	7440393	01007	10	♦	---	---	♦	---
	Bis-chloromethyl ether	542881	34268	20	♦	---	---	---	---
	Chloride	16887006	941	10000	---	---	---	---	♦
	Chlorine	7782505	50060	100	---	[3]	---	---	---
	2-(2,4,5-Trichlorophenoxy) propionic acid [2,4,5-TP Silvex]	93721	39760	0.5	---	♦	---	♦	---
	2,4-Dichlorophenoxyacetic acid [2,4-D]	94757	39730	1	---	---	---	♦	---
	Chloropyrifos [Dursban]	2921882	81403	0.05	---	♦	---	---	---
	Demeton	8065483	39560	1	---	♦	---	---	---
	Detergents, total		51582	100	---	---	---	♦	---
	Diazinon	333415	10408	1	---	♦	---	---	---
	Fluoride @ 90° F	16984488	951	1000	---	---	---	♦	---
	Guthion [Methyl azinphos]	86500	39580	1	---	♦	---	---	---
	Hexachlorocyclohexane-Technical	319868	77835	5	♦	---	---	---	---
	Hexahydro-1,3,5-trinitro-1,3,5-triazine [RDX]	121824	81364	140	---	♦	---	---	---
	Iron	7439896	00980	200	♦	---	---	---	---
	Malathion	121755	39530	1	---	♦	---	---	---
	Manganese	7439965	01055	50	♦	---	---	---	---
	Methoxychlor	72435	39480	0.05	♦	♦	---	♦	---
	Methylene blue active substances	61734	47021	100	---	♦	---	♦	---
	Mirex	2385855	39755	0.05	---	♦	---	---	---
	Nitrate	14797558	00620	50	♦	---	---	♦	---
	Nitrosamines		---	50	♦	---	---	---	---
	n-Nitrosodibutylamine	924164	78301	50	♦	---	---	---	---

[1]From National Recommended Water Quality Criteria, Publication No. EPA 822-Z-99-001, April 1999.
[2]DEQ-adopted numerical water quality criteria, OAC 252:730, Subchapter 5.
[3]Ammonia and chlorine criteria apply to implementation of narrative toxicity criterion under OAC 252:730 and 40 CFR Part 122.44(d)(1)(vi).

Table H-2 (continued). Nonpriority Pollutants with State Water Quality Criteria or National Recommended Water Quality Criteria Requiring Reasonable Potential Screening

	Pollutant	CAS No.	STORET No.	MQL (µg/L)	NRWQC Human Health[1]	State Criteria[2]			
						Aquatic Toxicity	Human Health	Raw Water	Agriculture
Nonpriority Pollutants	n-Nitrosodiethylamine	55185	78200	50	♦	---	---	---	---
	n-Nitrosopyrrolidine	930552	78206	50	♦	---	---	---	---
	Nonylphenol	25154523	10395	100	---	♦	---	---	---
	Parathion	56382	39540	1	---	♦	---	---	---
	Pentachlorobenzene	608935	77793	50	♦	---	---	---	---
	Perchlorate	7601903	3215	5	---	♦	♦	---	---
	Phthalate esters (except butylbenzyl)		39117	---	---	---	---	♦	---
	Sulfate		00946	10000	---	---	---	---	♦
	Total Dissolved Solids [TDS]		70300	10000	---	---	---	---	♦
	1,2,4,5-Tetrachlorobenzene	95943	78028	50	♦	---	---	---	---
	2,4,5-Trichlorophenol	95954	81848	50	♦	---	---	---	---
	2,4,6-Trinitrotoluene		81360	---	---	♦	---	---	---

[1]From National Recommended Water Quality Criteria, Publication No. EPA 822-Z-99-001, April 1999.
[2]DEQ-adopted numerical water quality criteria, OAC 252:730, Subchapter 5.

Table H-3. WET Testing and WET Limit Parameters

Parameters			STORET No.	NRWQC Human Health[1]	State Criteria[2]			
					Aquatic Toxicity	Human Health	Raw Water	Agriculture
48-hour Acute LC50, Static Renewal, Freshwater	Daphnia magna	P/F survival	TIM3C	---	♦	---	---	---
		LC50 effluent concentration	TAM3C	---	♦	---	---	---
		% mortality in 100% effluent	TJM3C	---	♦	---	---	---
	Daphnia pulex	P/F survival	TIM3D	---	♦	---	---	---
		LC50 effluent concentration	TAM3D	---	♦	---	---	---
		% mortality in 100% effluent	TJM3D	---	♦	---	---	---
	Pimephales promelas	P/F survival	TIM6C	---	♦	---	---	---
		LC50 effluent concentration	TAM6C	---	♦	---	---	---
		% mortality in 100% effluent	TJM6C	---	♦	---	---	---
	WET Limit	LC50 > 100%	22414	---	♦	---	---	---
7-day Chronic NOEC, Static Renewal, Freshwater	Ceriodaphnia dubia	P/F survival	TLP3B	---	♦	---	---	---
		NOECL (lethality)	TOP3B	---	♦	---	---	---
		% mortality in critical dilution	TJP3B	---	♦	---	---	---
		P/F reproduction	TGP3B	---	♦	---	---	---
		NOECS (reproduction)	TPP3B	---	♦	---	---	---
		% CV	TQP3B	---	♦	---	---	---
	Pimephales promelas	P/F survival	TLP6C	---	♦	---	---	---
		NOECL (lethality)	TOP6C	---	♦	---	---	---
		% mortality in critical dilution	TJP6C	---	♦	---	---	---
		P/F growth	TGP6C	---	♦	---	---	---
		NOECS (growth)	TPP6C	---	♦	---	---	---
		% CV	TQP6C	---	♦	---	---	---
	WET Limit	NOECL ≥ critical dilution	22414	---	♦	---	---	---

[1] From National Recommended Water Quality Criteria, Publication No. EPA 822-Z-99-001, April 1999.
[2] DEQ-adopted numerical water quality criteria, OAC 252:730, Subchapter 5.

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX I. Methodology and Equations for Characterizing Effluent and Background Concentrations in Determination of Reasonable Potential to Exceed Numerical Criteria

APPENDIX I. METHODOLOGY AND EQUATIONS FOR CHARACTERIZING EFFLUENT AND BACKGROUND CONCENTRATIONS IN DETERMINATION OF REASONABLE POTENTIAL TO EXCEED NUMERICAL CRITERIA

I. EFFLUENT

A. Measures of central tendency. $C_{E(mean)}$ represents the mean of an effluent distribution. $C_{E(mean)}$ is a geometric mean, unless the geometric mean is not determinable in which case an arithmetic mean is used. Where one or the other form of the mean must be used in an equation, that form is explicitly stated.

(1) **$C_{E(avg)}$.** $C_{E(avg)}$ is calculated as follows:

$$C_{E(avg)} = \frac{\left(\sum_{i=1}^{N} x_i\right)}{N} \qquad \text{[I-1]}$$

(2) **$C_{E(geomean)}$.** $C_{E(geomean)}$ is calculated according to either of the following two forms, which are equivalent.

$$C_{E(geomean)} = \mathrm{EXP}\left(\frac{\left(\sum_{i=1}^{N} \ln(x_i)\right)}{N}\right) = \sqrt[N]{\prod_{i=1}^{N} x_i} \qquad \text{[I-2]}$$

B. Effluent variability. An effluent data set's standard deviation is the primary measure of its variability. Generally, as the mean of an effluent distribution increases, its standard deviation also tends to increase. The coefficient of variation is a measure of a data set's variability relative to its arithmetic mean.

(1) **Standard deviation of untransformed effluent data set (s_X).** The standard deviation of an untransformed effluent data set is calculated as follows:

$$s_X = \sqrt{\frac{N\sum_{i=1}^{N}\left(x_i^2\right) - \left(\sum_{i=1}^{N} x_i\right)^2}{N(N-1)}}, \qquad \text{[I-3]}$$

where N is the number of data points in the effluent data set.

(2) **Standard deviation of log-transformed effluent data set ($s_{ln(x)}$).** The standard deviation of a log-transformed effluent data set is calculated as follows:

$$s_{\ln(x)} = \sqrt{\frac{N\sum_{i=1}^{N}\left(\ln(x_i)^2\right) - \left(\sum_{i=1}^{N}\ln(x_i)\right)^2}{N(N-1)}}, \qquad \text{[I-4]}$$

where N is the number of data points in the effluent data set.

The standard deviation of a log-transformed data set applies only to the transformed data set and cannot be translated back into an equivalent untransformed data set standard deviation, for example:

$$\mathrm{EXP}\left(s_{\ln(x)}\right) \neq s_x$$

(3) **CV.** The CV of an untransformed data set is calculated as follows, when using at least ten (10) data points (if less than ten data points are available, a value of 0.6 is assumed):

$$CV = \frac{s_x}{C_{E(avg)}}, \qquad \text{[I-5]}$$

where $C_{E(avg)}$ and s_x are determined according to Equations I-1 and I-3, respectively.

C. **C_{95} and $C_{95(M)}$.** The use of both C_{95} and $C_{95(M)}$ assumes a log-normal effluent distribution. For the purpose of determining whether **effluent limitations** are required, C_{95} represents the 95th percentile effluent concentration. For the purpose of determining whether further **effluent monitoring** is required, if C_{95} does not exhibit reasonable potential then $C_{95(M)}$ is used.

(1) **C_{95}.** The method by which C_{95} is determined is dependent on whether there are 10or more data points available.

(a) **Less than 10 data points available.** The mean effluent concentration ($C_{E(mean)}$) is multiplied by a reasonable potential factor (RPF_{95}), which represents the 95th percentile maximum likelihood estimator for a log-normal distribution, according to Equation I-6. If only one data point is available, it is assumed to represent the effluent mean. RPF_{95} is calculated according to Equation I-7, assuming a CV of 0.6.

$$C_{95} = C_{E(mean)} \times RPF_{95} \qquad \text{[I-6]}$$

$$RPF_{95} = \mathrm{EXP}\left(1.645\sqrt{\ln\left(1+CV^2\right)} - 0.5\ln\left(1+CV^2\right)\right) \qquad \text{[I-7]}$$

Since a CV of 0.6 is assumed, $RPF_{95} = 2.135$ and Equation I-6 reduces to $C_{95} = C_{E(mean)} \times 2.135$. Where determinable, the geometric mean, $C_{E(geomean)}$, shall be used as $C_{E(mean)}$

in Equation I-6. The arithmetic mean, $C_{E(avg)}$, may be used if the geometric mean is unknown or undeterminable.

(b) **Ten or more data points available.** C_{95} is obtained directly from the data set as the inverse of the cumulative log-normal distribution function at a 95% probability using Equation I-8.

$$C_{95} = \mathrm{EXP}\left(\ln(x)_{avg} + 1.645 \times s_{\ln(x)}\right) \qquad \text{[I-8]}$$

where $\ln(x)_{avg}$ is the arithmetic mean of the log-transformed effluent data set and $s_{\ln(x)}$ is the standard deviation of the log-transformed effluent data set.

(2) **$C_{95(M)}$.** The smaller the size of an effluent data set, the greater the uncertainty of its distribution. The extreme case occurs where only one data point is available. Where less than 10 data points are available to determine C_{95}, further effluent monitoring may be warranted for the purpose of future reevaluation of reasonable potential. The method used, referred to as the TSD method, is described in Section 3.3.2 of Technical Support Document for Water Quality-Based Toxics Control, EPA Publication No. EPA/505/2-90-001, March 1991. A log-normal distribution and a CV of 0.6 are assumed. $C_{95(M)}$ is calculated according to Equation I-9.

$$C_{95(M)} = C_{E(max)} \times RPF_{95(M)} \qquad \text{[I-9]}$$

$C_{E(max)}$ is the highest concentration of a toxicant in its effluent data set. If only one data point is available, it is considered to be $C_{E(max)}$. $RPF_{95(M)}$ is determined at a 95% confidence level and a 95% probability basis, according to Equation I-10.

$$RPF_{95(M)} = \frac{\mathrm{EXP}\left(1.645\sqrt{\ln\left(1+CV^2\right)} - 0.5\ln\left(1+CV^2\right)\right)}{\mathrm{EXP}\left(z_N\sqrt{\ln\left(1+CV^2\right)} - 0.5\ln\left(1+CV^2\right)\right)} \qquad \text{[I-10]}$$

where z_N is the upper k^{th} percentile of the normal distribution, k = (1-confidence level)$^{1/N}$ = $(0.05)^{1/N}$ for the 95% confidence level, and CV=0.6.

Table I-1 lists $RPF_{95(M)}$ values for vales of N from 1 to 9, where CV is assumed to be 0.6.

Table I-1. $RPF_{95(M)}$ and z_N Values for N<10

N	z_N	$RPF_{95(M)}$
1	-1.645	6.199
2	-0.760	3.795
3	-0.336	3.000
4	-0.068	2.585
5	0.124	2.324
6	0.272	2.141
7	0.390	2.006
8	0.489	1.898
9	0.574	1.811

(II) **BACKGROUND (C_B).**

(A) Numerical criteria for toxic substances: As described in OAC 252:606-6-11 and 14, C_B is the background concentration representative of low stream flow (7Q2) conditions.

(B) Human health and raw water criteria. As described in OAC 252:606-6-11 and 15, C_B is the long-term background concentration representative of average stream flow conditions, and is expressed as a geometric mean.

(C) Agriculture criteria. As described in OAC 252:606-6-11 and 16, if site-specific mineral constituent background data is used (as opposed to the historical YMS and SS criteria in Appendix F of OAC 252:730), C_B is calculated as the arithmetic average of the site-specific background data distribution. If historical YMS and SS data from Appendix F of OAC 252:730 are used, C_B is calculated according to Equation I-11.

$$C_B = 2 \times C_{B(YMS)} - C_{B(SS)} \qquad \text{[I-11]}$$

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX J. Whole Effluent Toxicity (WET) Testing Critical Dilutions and Dilution Series

APPENDIX J. WHOLE EFFLUENT TOXICITY (WET) TESTING CRITICAL DILUTIONS AND DILUTION SERIES

The narrative toxicity criterion is implemented according to procedures in OAC 252:740 and OAC 252:606-6-17 through 6-43. Critical dilutions are expressed in terms of percent effluent. Both types of WET testing require that test organisms be subjected to a series of effluent dilutions based on the critical dilution. Tables J-1 and J-2 reflect the 0.75 dilution series to be used for each percent critical dilution. For WET testing purposes, Q_e is the design flow for a municipal POTW or the highest monthly average flow over the most recent two-year period of record for an industrial facility. Q_u is the higher of the 7Q2 or 1cfs. $Q^* = Q_e/Q_u$.

(1) **Acute WET testing critical dilution.** The ACD is 100%.

(2) **Chronic WET testing critical dilution for streams.** Equations for calculating the CCD are as follows:

$$CCD = 100 \times \frac{1.94\ Q^*}{(1 + Q^*)}, \text{ where } Q^* \leq 0.1823. \qquad \text{[J-1]}$$

$$CCD = 100 \times \frac{1}{(6.17 - 15.51 Q^*)}, \text{ where } 0.1823 < Q^* < 0.3333. \qquad \text{[J-2]}$$

$$CCD = 100, \text{ where } Q^* \geq 0.3333. \qquad \text{[J-3]}$$

Table J-1. 0.75 Dilution Series for Critical Dilutions from 10% through 75%

Percent Effluent					
Dilution 1	Dilution 2	Dilution 3	Dilution 4 (Critical Dil)	Dilution 5	Dilution 6
4.2	5.6	7.5	10	13	---
4.6	6.2	8.3	11	15	---
5.1	6.8	9.0	12	16	---
5.6	7.5	10	13	17	---
5.9	7.9	11	14	19	---
6.3	8.4	11	15	20	---
6.8	9.0	12	16	21	---
7.2	9.6	13	17	23	---
7.6	10	14	18	24	---
8.0	11	14	19	25	---
8.4	11	15	20	27	---
9.0	12	16	21	28	---
9.3	12	17	22	29	---
9.7	13	17	23	31	---
10	14	18	24	32	---
11	14	19	25	33	---
11	15	20	26	35	---
11	15	20	27	36	---
12	16	21	28	37	---
12	16	22	29	39	---
13	17	23	30	40	---
13	17	23	31	41	---
14	18	24	32	43	---
14	19	25	33	44	---
14	19	26	34	45	---
15	20	26	35	47	---
15	20	27	36	48	---
16	21	28	37	49	---
16	21	29	38	51	---
16	22	29	39	52	---
17	23	30	40	53	---
17	23	31	41	55	---
18	24	32	42	56	---
18	24	32	43	57	---
19	25	33	44	59	---
19	25	34	45	60	---
19	26	35	46	61	---
20	26	35	47	63	---
20	27	36	48	64	---

Table J-1 (continued). 0.75 Dilution Series for Critical Dilutions from 10% through 75%

Percent Effluent					
Dilution 1	Dilution 2	Dilution 3	Dilution 4 (Critical Dil)	Dilution 5	Dilution 6
21	28	37	49	65	---
21	28	38	50	67	---
22	29	38	51	68	---
22	29	39	52	69	---
22	30	40	53	71	---
23	30	41	54	72	---
23	31	41	55	73	---
24	32	42	56	75	---
24	32	43	57	76	---
24	33	44	58	77	---
25	33	44	59	79	---
25	34	45	60	80	---
26	34	46	61	81	---
26	35	47	62	83	---
27	35	47	63	84	---
27	36	48	64	85	---
27	37	49	65	87	---
28	37	50	66	88	---
28	38	50	67	89	---
29	38	51	68	91	---
29	39	52	69	92	---
30	39	53	70	93	---
30	40	53	71	95	---
30	41	54	72	96	---
31	41	55	73	97	---
31	42	56	74	99	---
32	42	56	75	100	---

Table J-2. 0.75 Dilution Series for Critical Dilutions Above 75%

Percent Effluent					
Dilution 1	Dilution 2	Dilution 3	Dilution 4	Dilution 5 (Critical Dil)	Dilution 6
24	32	43	57	76	100
24	32	43	58	77	100
25	33	44	59	78	100
25	33	44	59	79	100
25	34	45	60	80	100
26	34	46	61	81	100
26	35	46	62	82	100
26	35	47	62	83	100
27	35	47	63	84	100
27	36	48	64	85	100
27	36	48	65	86	100
28	37	49	65	87	100
28	37	50	66	88	100
28	38	50	67	89	100
28	38	51	68	90	100
29	38	51	68	91	100
29	39	52	69	92	100
29	39	52	70	93	100
30	40	53	71	94	100
30	40	53	71	95	100
30	41	54	72	96	---
31	41	55	73	97	---
31	41	55	74	98	---
31	42	56	74	99	---
32	42	56	75	100	---

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX K. Equations for Implementation of Temperature Criteria to Protect the Fish and Wildlife Propagation Beneficial Use

APPENDIX K. EQUATIONS FOR IMPLEMENTATION OF TEMPERATURE CRITERIA TO PROTECT THE FISH AND WILDLIFE PROPAGATION BENEFICIAL USE

(1) **General.** The temperature criterion is implemented according to procedures in OAC 252:740 and OAC 252:606-6-44 through 6-50. Wasteload allocation, criterion long term average and permit limit development equations are described in this appendix.

(2) **Reasonable potential.**
See OAC 252:740.

(3) **WLA_T.** Trout fisheries by definition require a WLA_T of 20 °C (see OAC 252:606-6-53). Other than for trout fisheries, if $\Delta T_{max} > 2.8$ °C, a WLA is required.

(A) **Streams.**

$$WLA_T = T_a + \frac{1.44\,(1 + Q^*)}{Q^*}, \text{ where } Q^* \leq 0.1823. \qquad \text{[K-1]}$$

$$WLA_T = T_a + 17.276 - 43.428\,Q^*, \text{ where } 0.1823 < Q^* < 0.3333. \qquad \text{[K-2]}$$

$$WLA_T = T_a + 2.8, \text{ where } Q^* \geq 0.3333. \qquad \text{[K-3]}$$

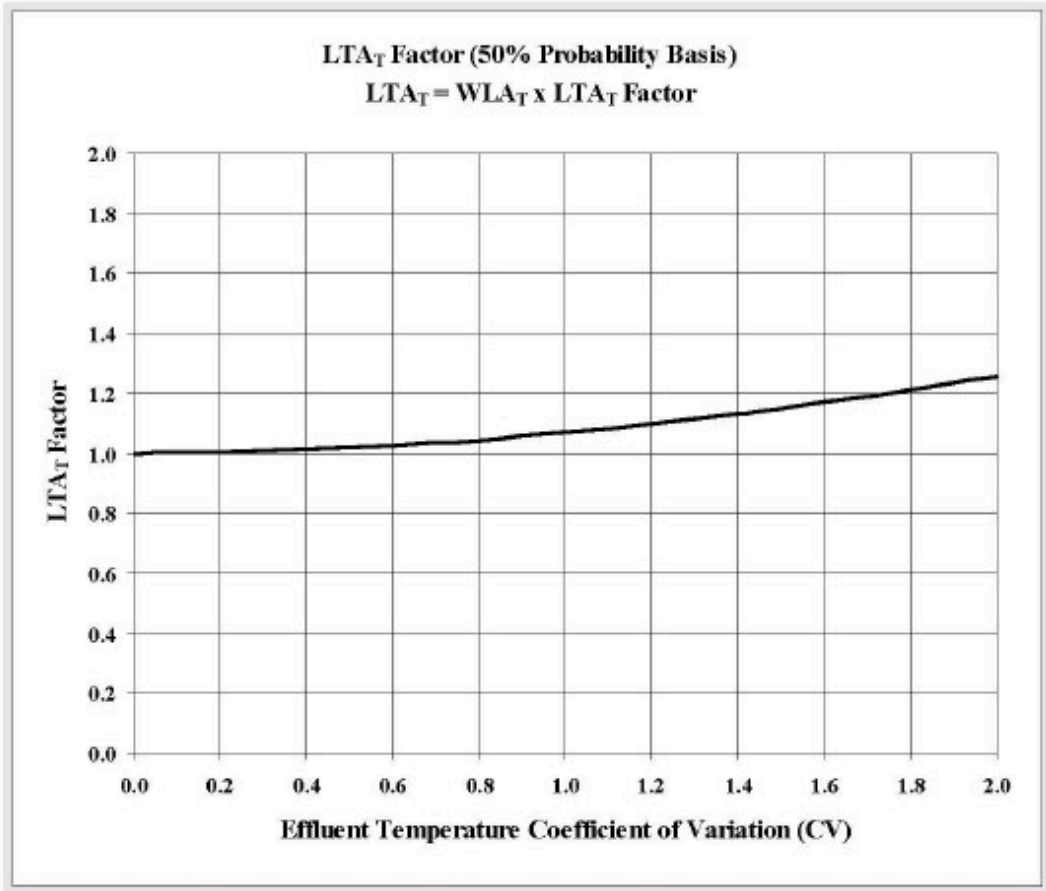
(B) **Lakes.**

$$WLA_T = T_a + \frac{56.42}{D}, \text{ where the discharge is by pipe.} \qquad \text{[K-4]}$$

$$WLA_T = T_a + \frac{11.76}{\sqrt{W}}, \text{ where the discharge is by canal.} \qquad \text{[K-5]}$$

(4) **LTA_T (50% probability basis).**

$$LTA_T = WLA_T \times EXP\left(0.5 \ln\left(1 + \frac{CV^2}{7}\right)\right) \qquad \text{[K-6]}$$



(5) **Permit limitations.**

(A) **MAL$_T$ (95% probability basis).**

$$MAL_T = LTA_T \times EXP\left(1.645\sqrt{\ln\left(1+\frac{CV^2}{N_m}\right)} - 0.5\ln\left(1+\frac{CV^2}{N_m}\right)\right) \qquad [K\text{-}7]$$

If calculated MAL$_T$ exceeds 52 °C, it is capped at 52 °C for antidegradation purposes.

(B) **WAL$_T$ (95% probability basis).**

$$WAL_T = LTA_T \times EXP\left(1.645\sqrt{\ln\left(1+\frac{CV^2}{N_w}\right)} - 0.5\ln\left(1+\frac{CV^2}{N_w}\right)\right) \qquad [K\text{-}8]$$

If calculated WAL_T exceeds 52 °C, it is capped at 52 °C for antidegradation purposes.

(C) **DML_T**

If a daily maximum limit is required for thermal antidegradation purposes, then DML_T = 52 °C.

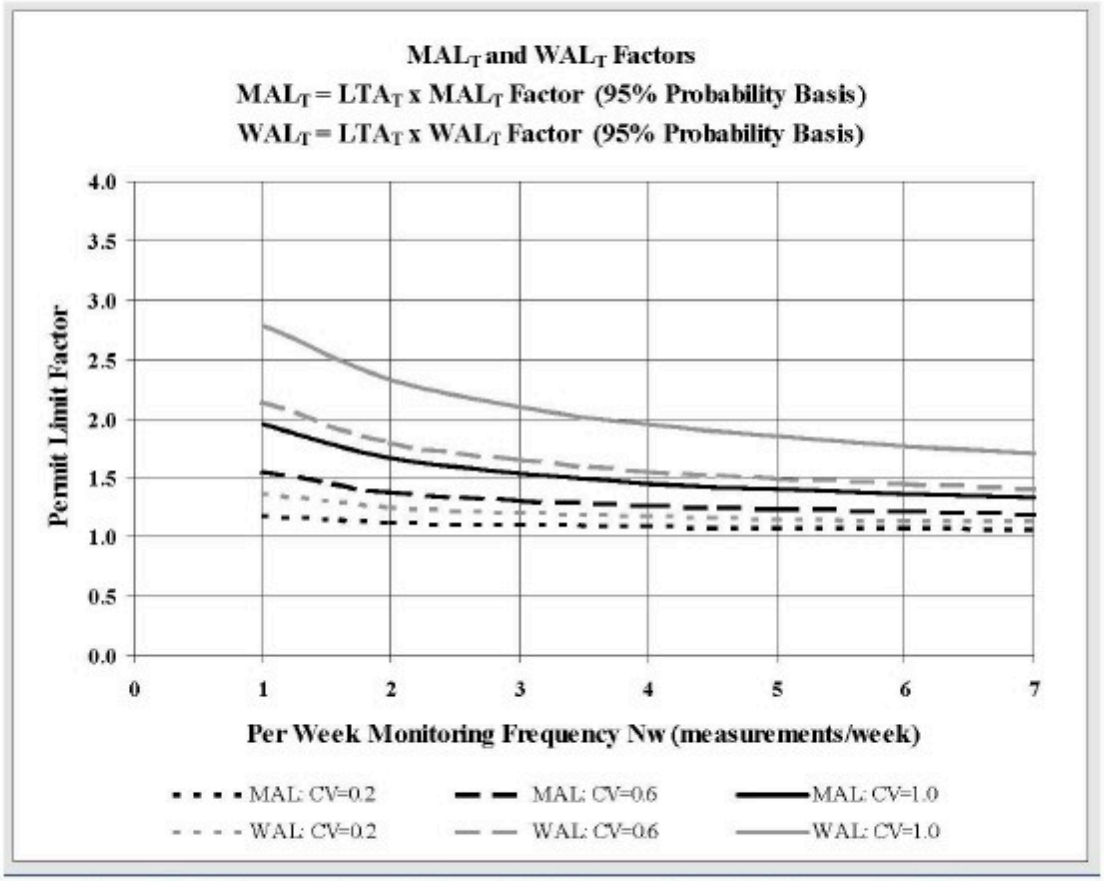


Figure K-2. Temperature MAL and WAL Permit Limit Factors vs. Per Week Monitoring Frequency N_w

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX L. Equations for Implementation of Numerical Criteria for Toxic Substances to Protect the Fish and Wildlife Propagation Beneficial Use

APPENDIX L. EQUATIONS FOR IMPLEMENTATION OF NUMERICAL CRITERIA FOR TOXIC SUBSTANCES TO PROTECT THE FISH AND WILDLIFE PROPAGATION BENEFICIAL USE

(1) **General.** Acute and chronic toxicity numerical criteria are implemented according to OAC 252:740 and OAC 252:606-6-51 through 6-57. WLA, criterion LTA and permit limit development equations are described in this appendix.

(2) **Reasonable potential for discharges to streams.**
See OAC 252:740.

(3) **Reasonable potential for discharge to lakes.**
See OAC 252:740.

(4) **WLA_A and WLA_C for discharges to streams.**

(A) **Acute criteria WLA.**

$$WLA_A = C_B + \frac{100\,(C_A - C_B)}{Q_e}$$, where Q_e is expressed in cfs. [L-1]

$$WLA_A = C_B + \frac{64.63\,(C_A - C_B)}{Q_e}$$, where Q_e is expressed in MGD. [L-2]

(B) **Chronic criteria WLA.**

$$WLA_C = C_B + \frac{(1 + Q^*)(C_C - C_B)}{(1.94\,Q^*)}$$, where $Q^* \leq 0.1823$. [L-3]

$$WLA_C = C_B + (6.17 - 15.51\,Q^*)(C_C - C_B)$$, where $0.1823 < Q^* < 0.3333$. [L-4]

$$WLA_C = C_C$$, where $Q^* \geq 0.3333$. [L-5]

(5) **WLA_A and WLA_C for discharges to lakes.** The chronic WLA is calculated if a chronic criterion applies. An acute WLA is used only in the absence of a chronic criterion.

$$WLA_{C,A} = C_B + \frac{20.15\,(C_{C,A} - C_B)}{D}$$, where the discharge is by pipe. [L-6]

$$WLA_{C,A} = C_B + \frac{4.2\,(C_{C,A} - C_B)}{\sqrt{W}}$$, where the discharge is by canal. [L-7]

(6) **LTA_A and LTA_C (99% probability basis).** Whether the receiving water is a stream or lake, criterion LTAs are calculated in the same fashion. LTA_{TOX} is the more stringent of the two toxicity LTAs.

$$LTA_A = WLA_A \times EXP\left(0.5\ln\left(1+CV^2\right) - 2.326\sqrt{\ln\left(1+CV^2\right)}\right) \quad [L\text{-}8]$$

$$LTA_C = WLA_C \times EXP\left(0.5\ln\left(1+\frac{CV^2}{4}\right) - 2.326\sqrt{\ln\left(1+\frac{CV^2}{4}\right)}\right) \quad [L\text{-}9]$$

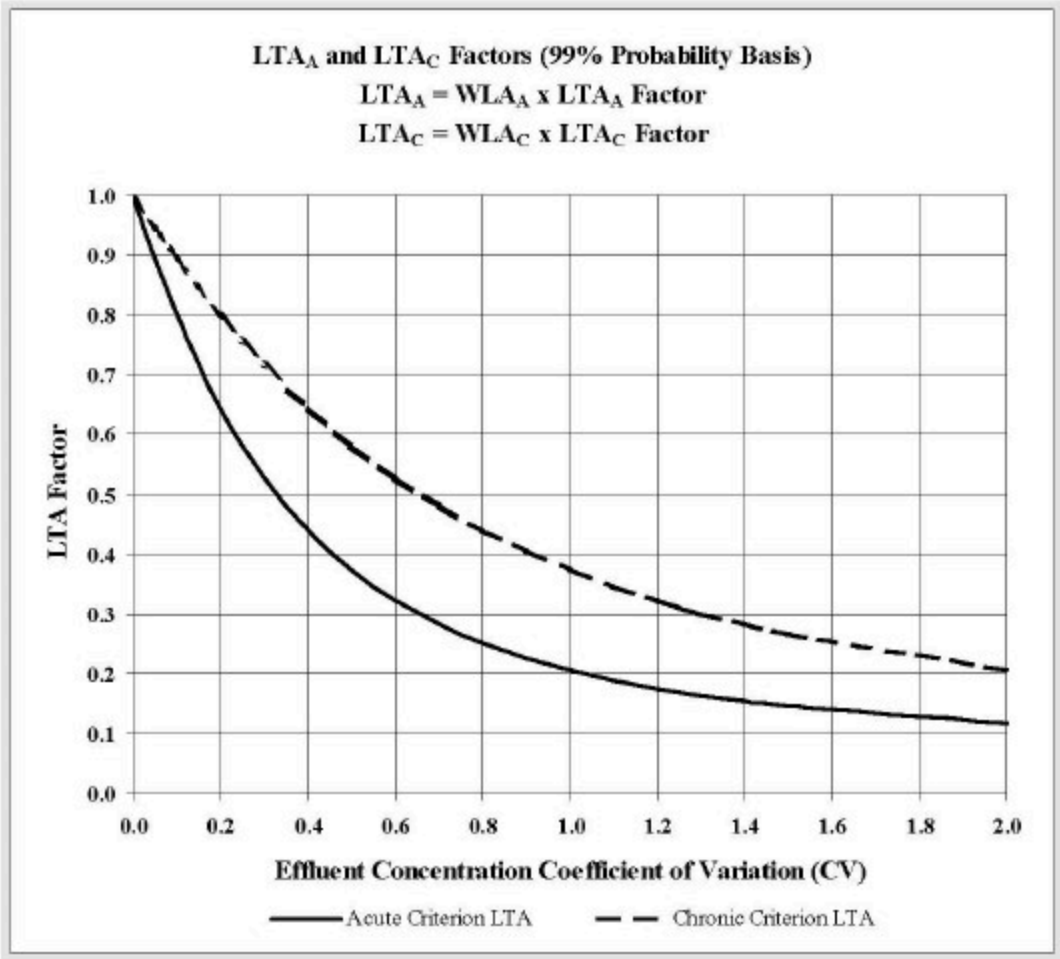


Figure L-1. Aquatic Toxicity LTA Factors vs. Effluent Coefficient of Variation

(7) **Permit limitations.**

(A) **MAL_{TOX} (95% probability basis).**

$$MAL_{TOX} = LTA_{TOX} \times EXP\left(1.645\sqrt{\ln\left(1+\frac{CV^2}{N_m}\right)} - 0.5\ln\left(1+\frac{CV^2}{N_m}\right)\right) \quad \text{[L-10]}$$

(B) **DML_{TOX} (99% probability basis).**

$$DML_{TOX} = LTA_{TOX} \times EXP\left(2.326\sqrt{\ln\left(1+CV^2\right)} - 0.5\ln\left(1+CV^2\right)\right) \quad \text{[L-11]}$$

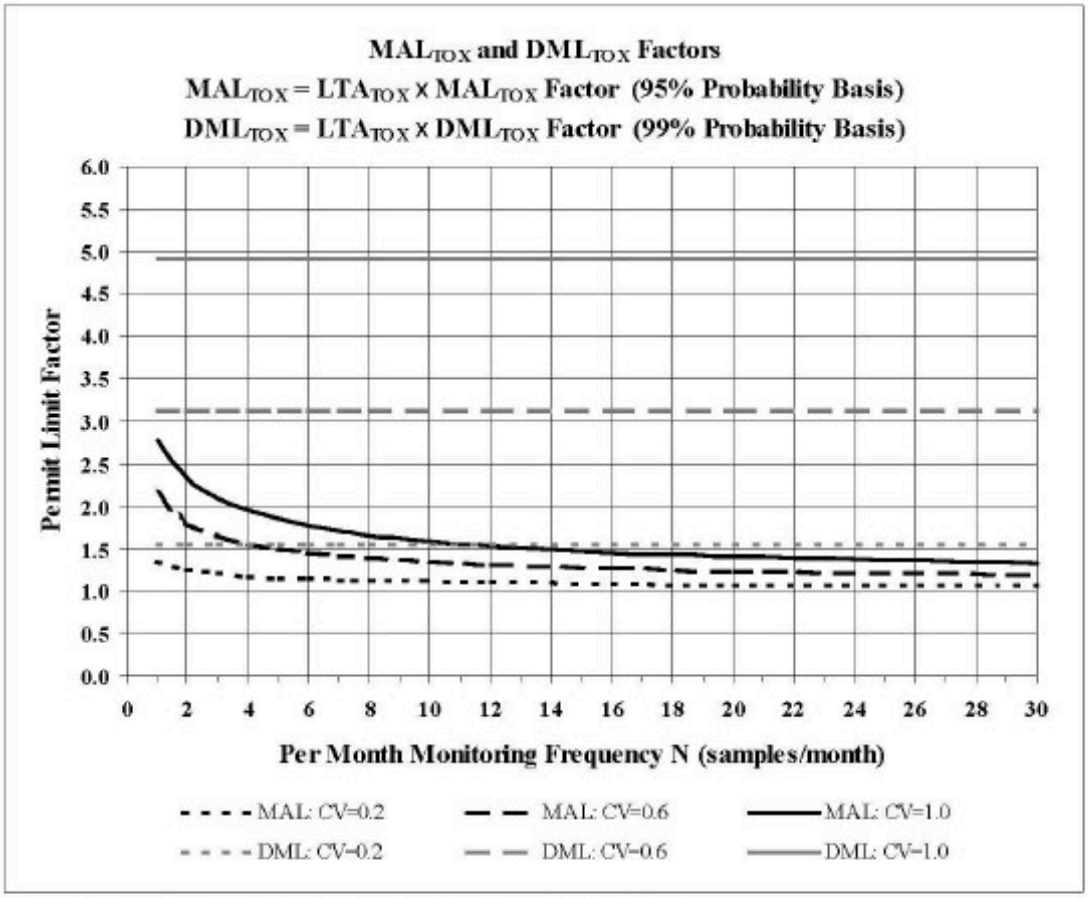


Figure L-2. Toxicity-Based MAL and DML Permit Limit Factors vs. Per Month Monitoring Frequency N_m

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX M. Equations for Implementation of Numerical Human Health and Raw Water Criteria to Protect the Fish Consumption and Public and Private Water Supply Beneficial Uses

APPENDIX M. EQUATIONS FOR IMPLEMENTATION OF NUMERICAL HUMAN HEALTH AND RAW WATER CRITERIA TO PROTECT THE FISH CONSUMPTION AND PUBLIC AND PRIVATE WATER SUPPLY BENEFICIAL USES

(1) **General.** Human health numerical criteria (for consumption of fish flesh and consumption of fish flesh and water) and raw water column criteria are implemented according to OAC 252:740 and OAC 252:606-6-64 through 6-77. Wasteload allocation, criterion long-term average and permit limit development equations are described in this appendix.

(2) **Reasonable potential.**
See OAC 252:740.

(3) **WLA_{FF}, WLA_{FFW} and WLA_{RAW}.**

$$WLA_{FF} = C_{FF} + \frac{(C_{FF} - C_B)}{Q^*} \quad [M\text{-}1]$$

$$WLA_{FFW} = C_{FFW} + \frac{(C_{FFW} - C_B)}{Q^*} \quad [M\text{-}2]$$

$$WLA_{RAW} = C_{RAW} + \frac{(C_{RAW} - C_B)}{Q^*} \quad [M\text{-}3]$$

(4) **LTA_{FF}, LTA_{FFW} and LTA_{RAW}.**

$$LTA_{FF} = WLA_{FF} \quad [M\text{-}4]$$

$$LTA_{FFW} = WLA_{FFW} \quad [M\text{-}5]$$

$$LTA_{RAW} = WLA_{RAW} \quad [M\text{-}6]$$

(5) **Permit Limitations.** MALs and DMLs are calculated for the human health/fish flesh, human health/fish flesh and water, and raw water column criteria according to the following equations, where "HH" is used as the common descriptor for all three criteria.

(A) **MAL_{HH}.**

$$MAL_{HH} = LTA_{HH} \quad [M\text{-}7]$$

(B) **DML_{HH} (99% probability basis).**

$$DML_{HH} = LTA_{HH} \times EXP\left(\frac{2.326\sqrt{\ln(1+CV^2)} - 0.5\ln(1+CV^2)}{1.645\sqrt{\ln\left(1+\frac{CV^2}{N_m}\right)} - 0.5\ln\left(1+\frac{CV^2}{N_m}\right)}\right) \quad [M\text{-}8]$$

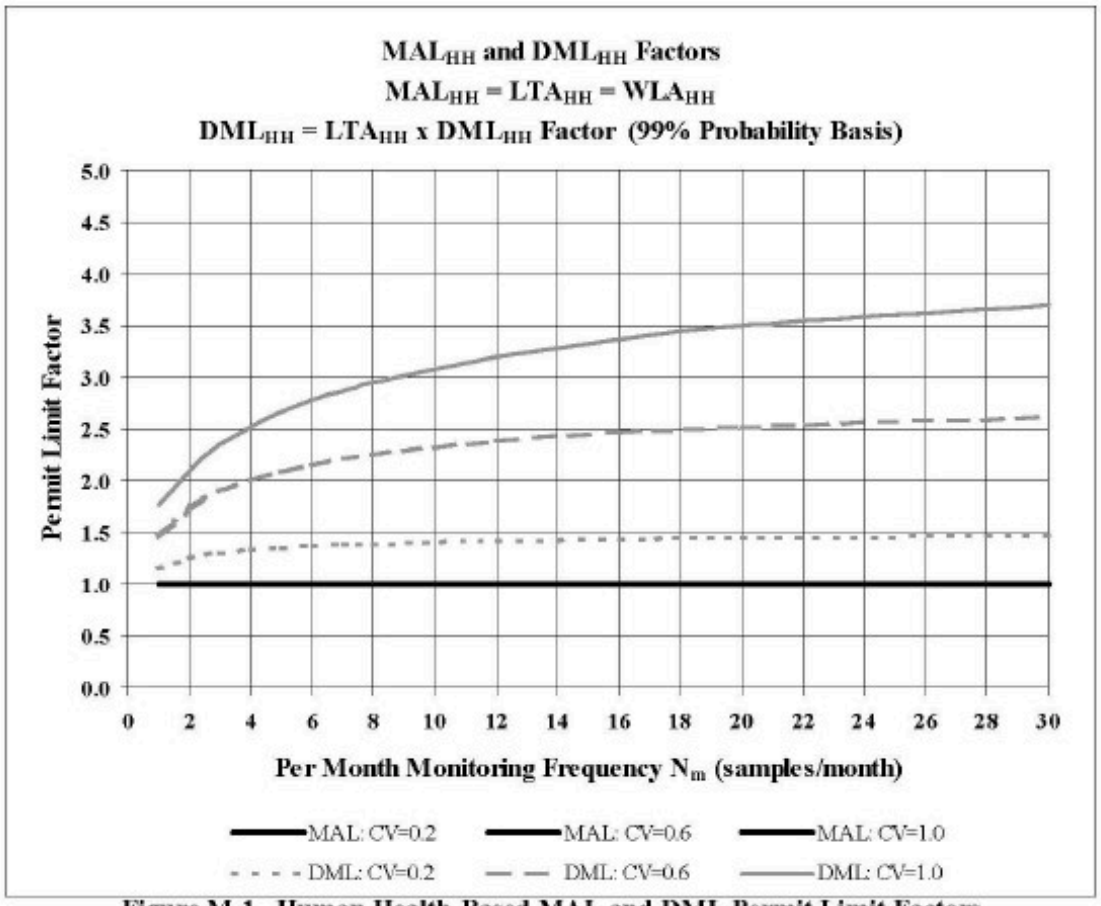


Figure M-1. Human Health-Based MAL and DML Permit Limit Factors vs. Per Month Monitoring Frequency N_m

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX N. Equations for Implementation of Numerical Criteria to Protect the Agriculture Beneficial Use

APPENDIX N. EQUATIONS FOR IMPLEMENTATION OF NUMERICAL CRITERIA TO PROTECT THE AGRICULTURE BENEFICIAL USE

(1) **General.** Agriculture use YMS and SS numerical criteria are implemented according to OAC 252:740 and OAC 252:606-6-79 through 6-85. Wasteload allocation, criterion long term average and permit limit development equations are described in this appendix.

(2) **Reasonable potential.**
See OAC 252:740.

(3) **WLA_{YMS} and WLA_{SS}.**

$$WLA_{YMS} = C_{YMS} + \frac{(C_{YMS} - C_B)}{Q^*} \quad [N\text{-}1]$$

$$WLA_{SS} = C_{SS} + \frac{(C_{SS} - C_B)}{Q^*} \quad [N\text{-}2]$$

(4) **LTA_{YMS} and LTA_{SS} for mineral constituents**

$$LTA_{YMS} = WLA_{YMS} \quad [N\text{-}3]$$

$$LTA_{SS} = WLA_{SS} \times EXP\left(0.5 \ln\left(1 + \frac{CV^2}{4}\right) - 2.326\sqrt{\ln\left(1 + \frac{CV^2}{4}\right)}\right) \quad [N\text{-}4]$$

(5) **LTA_{CL}, LTA_{SO4}, and LTA_{TDS}.**

$$LTA_{CL} = MIN(LTA_{YMS}, LTA_{SS}) \text{ for chlorides.} \quad [N\text{-}5]$$

$$LTA_{SO4} = MIN(LTA_{YMS}, LTA_{SS}) \text{ for sulfates.} \quad [N\text{-}6]$$

$$LTA_{TDS} = MIN(LTA_{YMS}, LTA_{SS}) \text{ for total dissolved solids.} \quad [N\text{-}7]$$

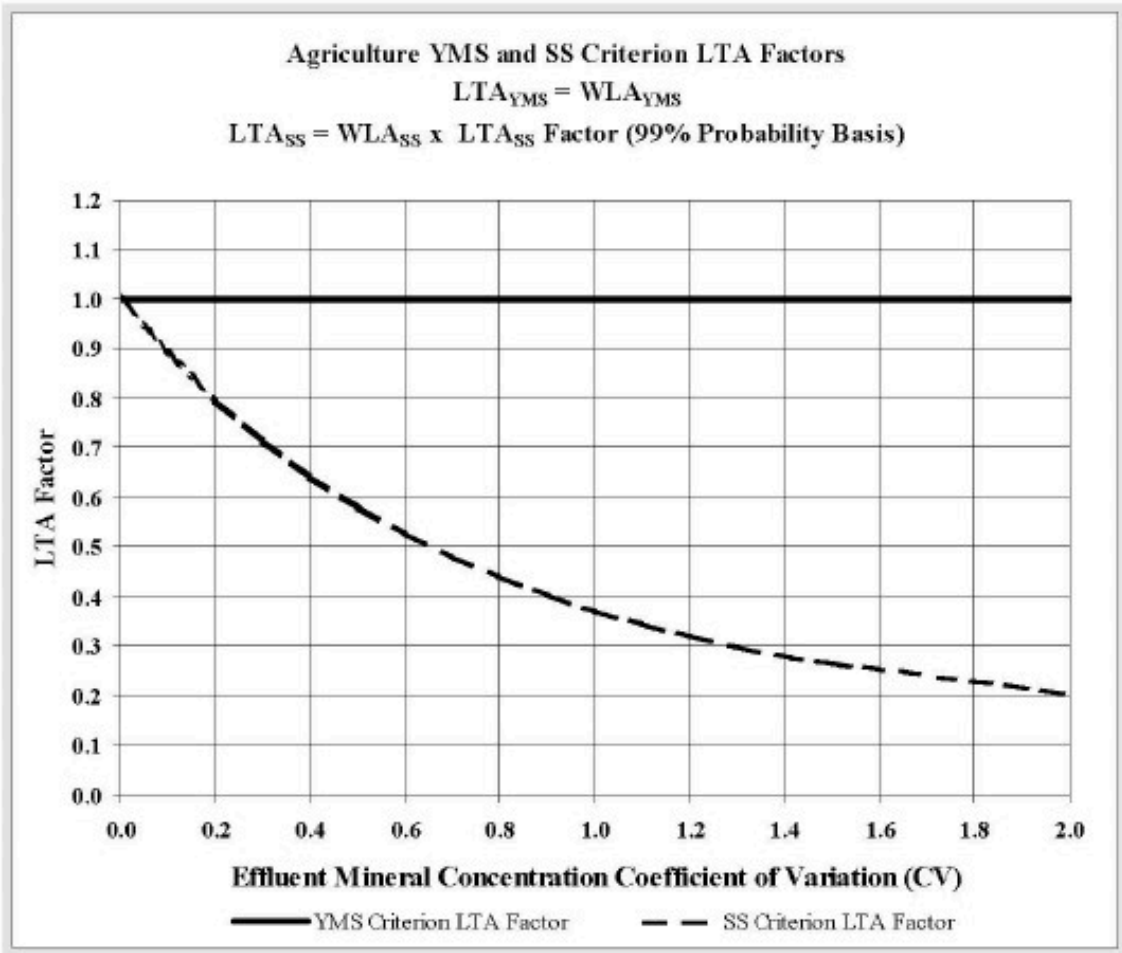


Figure N-1. Agriculture Criteria LTA Factors vs. Effluent Coefficient of Variation

(6) **Permit Limitations.** The more stringent of the YMS and SS LTAs for each mineral constituent is used to develop water quality-based permit limitations for that substance. OAC 252:730 requires that the long-term average mineral constituent concentrations used to develop permit limitations be not less than 700 mg/L for TDS and not less than 250 mg/L for chlorides and sulfates. The following permit limit development equations account for this minimum LTA requirement.

(A) **MAL_{CL}, MAL_{SO4}, and MAL_{TDS} (95% probability basis).**

$$MAL_{CL} = MAX(250, LTA_{CL}) \times EXP\left(1.645\sqrt{\ln\left(1+\frac{CV^2}{N_m}\right)} - 0.5\ln\left(1+\frac{CV^2}{N_m}\right)\right) \quad [N\text{-}8]$$

$$MAL_{SO4} = MAX(250, LTA_{SO4}) \times EXP\left(1.645\sqrt{\ln\left(1+\frac{CV^2}{N_m}\right)} - 0.5\ln\left(1+\frac{CV^2}{N_m}\right)\right) \quad [N\text{-}9]$$

$$MAL_{TDS} = MAX(700, LTA_{TDS}) \times EXP\left(1.645\sqrt{\ln\left(1+\frac{CV^2}{N_m}\right)} - 0.5\ln\left(1+\frac{CV^2}{N_m}\right)\right) \quad [N\text{-}10]$$

(B) **DML_{CL}, DML_{SO4}, and DML_{TDS} (95% probability basis).**

$$DML_{CL} = MAX\ (250,\ LTA_{CL}) \times EXP\left(1.645\sqrt{\ln\left(1+CV^2\right)} - 0.5\ \ln\left(1+CV^2\right)\right) \quad [N\text{-}11]$$

$$DML_{SO4} = MAX\ (250,\ LTA_{SO4}) \times EXP\left(1.645\sqrt{\ln\left(1+CV^2\right)} - 0.5\ \ln\left(1+CV^2\right)\right) \quad [N\text{-}12]$$

$$DML_{TDS} = MAX\ (700,\ LTA_{TDS}) \times EXP\left(1.645\sqrt{\ln\left(1+CV^2\right)} - 0.5\ \ln\left(1+CV^2\right)\right) \quad [N\text{-}13]$$

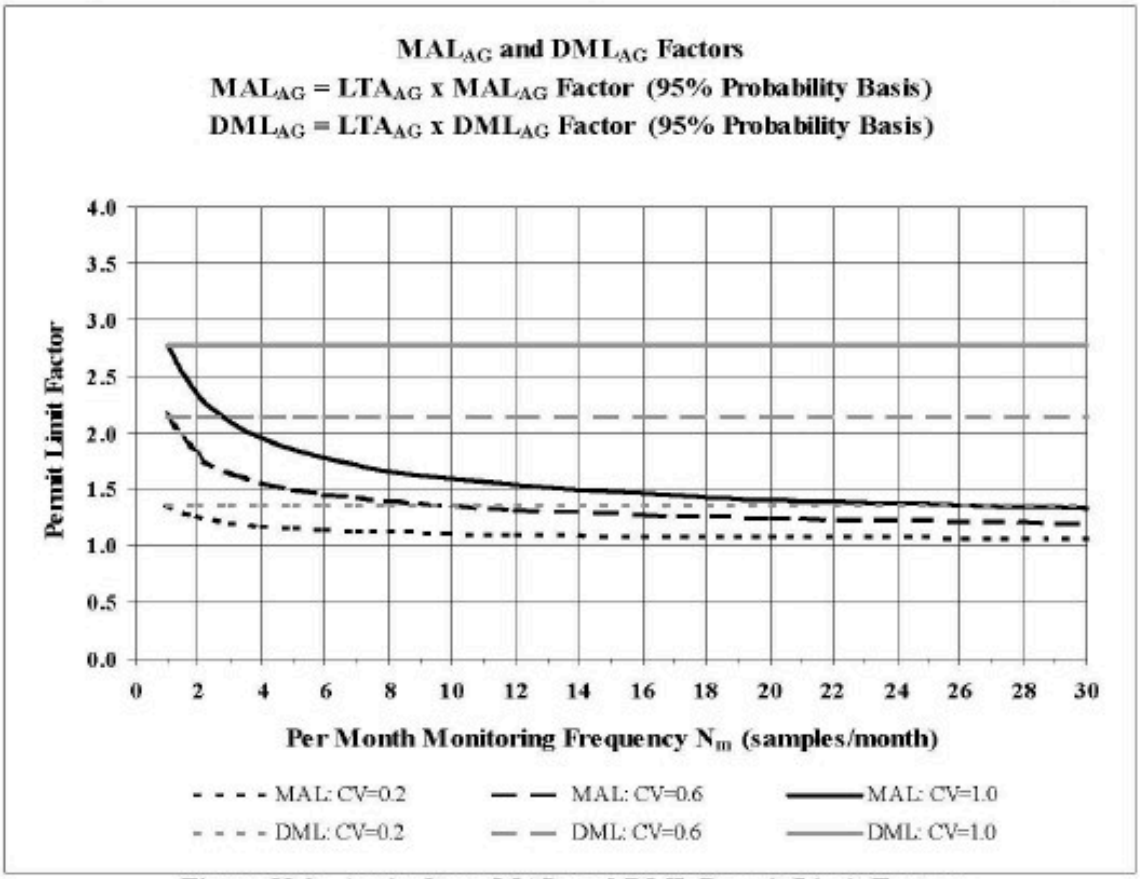


Figure N-2. Agriculture MAL and DML Permit Limit Factors vs. Per Month Monitoring Frequency N_m

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX O. Performance-based Effluent Monitoring Frequency Reductions and Increases

APPENDIX O. PERFORMANCE-BASED EFFLUENT MONITORING FREQUENCY REDUCTIONS AND INCREASES

If a permit contains a monthly average mass loading limit, but not a monthly average concentration limit, the equivalent monthly average concentration limit may be derived from the monthly average mass loading limit and the flow basis (the high 30-day average flow during the previous permit cycle for industrial facilities and the design flow for municipal facilities).

Table O-1. Performance Based Monitoring Frequency Reductions (No Permit Violations During The Previous Permit Cycle)*

Baseline Monitoring Frequency (previous permit cycle)	Ratio (Percent) of Long-term Average Effluent Concentration for The Previous Permit Cycle to Monthly Average Concentration Limit [a]				
	< 25%	≥25% and <50%	≥50% and <65%	≥65% and <75%	≥75%
7/week and daily	2/week	3/week	4/week	5/week	6/week
6/week	2/week	3/week	3/week	4/week	5/week
5/week	1/week	2/week	3/week	4/week	4/week
4/week	1/week	2/week	2/week	3/week	NR
3/week	1/week	2/week	2/week	NR	NR
2/week	2/month	1/week	1/week	NR	NR
1/week	1/month	2/month	NR	NR	NR
2/month	1/month	NR	NR	NR	NR
1/month	NR	NR	NR	NR	NR
1/2 months	NR	NR	NR	NR	NR

[a] NR means "no reduction."

* The frequency reductions stated in Table O-2 do not affect the need to conduct control tests and do not affect the number of control tests to be conducted. See OAC 252:606-6-91.

Table O-2. Monitoring Frequency Increases

Baseline Monitoring Frequency (previous permit cycle)	Increased Monitoring Frequency for parameters demonstrating a violation during the previous permit cycle [a]
7/week and daily	NI
6/week	7/week
5/week	7/week
4/week	6/week
3/week	5/week
2/week	4/week
1/week	3/week
2/month	2/week
1/month	1/week
1/2 months (every other month)	2/month
1/3 months (once per quarter)	1/month
1/6 months (semi-annually)	1/month
1/year	1/month

[a] NI means "no increase"

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]

APPENDIX P. Background Monitoring

APPENDIX P. BACKGROUND MONITORING

Background monitoring is unnecessary if a BT/C ratio is < 1.0. The maximum BT/C ratio for which background monitoring is required, which decreases as the value of the associated criterion increases, is expressed by Equations P-1, P-2 and P-3.

$BT/C_{max} = 1.0$, where the criterion is ≤ 1.0 µg/L [P-1]

$$BT/C_{max} = \frac{1}{2^{\log(criterion)}}$$, where the criterion > 1.0 µg/L and ≤ 1000µg/L [P-2]

$BT/C_{max} = 0.125$, where the criterion is > 1000 µg/L [P-3]

(i) Acute Toxicity Criteria

$$BT/C_{Acute} = \frac{\left(\frac{64.63\,C_A - Q_{e(30)}\,C_{95}}{64.63 - Q_{e(30)}}\right)}{C_A}$$, where $Q_{e(30)} < 64.63$ MGD [P-4]

BT/C_{Acute} = is not defined for values of $Q_{e(30)} \geq 64.63$ MGD

(ii) Chronic Toxicity Criteria

For discharges to streams, the following equations are used for values of $Q^* < 0.3333$:

$$BT/C_{Chronic} = \frac{\left[\frac{(1+Q^*)C_C - 1.94\,Q^*C_{95}}{1-0.94\,Q^*}\right]}{C_C}$$, where $Q^* \leq 0.1823$ [P-5]

$$BT/C_{Chronic} = \frac{\left[\frac{(6.17 - 15.51\,Q^*)C_C - C_{95}}{5.17 - 15.51\,Q^*}\right]}{C_C}$$, where $0.1823 < Q^* < 0.3333$ [P-6]

$BT/C_{Chronic}$ is not defined for $Q^* \geq 0.3333$ (i.e., for effluent-dominated discharge situations), since C_B drops out as a component of the chronic toxicity reasonable potential equation at that point.

(iii) Human Health/Fish Flesh Criteria

$$BT/C_{FF} = \frac{(1+Q^*)C_{FF} - Q^*C_{95}}{C_{FF}}$$ [P-7]

(iv) Raw Water Column Criteria

$$BTC/C_{Raw} = \frac{(1+Q^*)C_{RAW} - Q^*C_{95}}{C_{RAW}} \quad \text{[P-8]}$$

(v) **Human Health/Fish Flesh and Water Criteria**

$$BT/C_{FFW} = \frac{(1+Q^*)C_{FFW} - Q^*C_{95}}{C_{FFW}} \quad \text{[P-9]}$$

[**Source:** Added at 41 Ok Reg, Number 23, effective 9-15-24]