

**TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 606. OKLAHOMA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(OPDES) STANDARDS**

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 785:45, OAC 785:46, and OAC 252:690).

(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 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 the DEQ for the same institute in the same year;
 - (B) compliance with:
 - (i) The metal ceilings established in Table 1 of 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 the 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 eighteen 18 months or less, unless extended by the DEQ;
 - (E) notification to the 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 PCBs 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.*

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 the DEQ laboratory accreditation program.

~~"Approved laboratory"~~ means a laboratory accepted by the DEQ laboratory accreditation program.

"Beneficial use" means the use of biosolids or wastewater through land application for the purpose of soil conditioning, or crop or vegetative fertilization, or erosion control, or the use of wastewater for dust suppression where fugitive dust control would otherwise be an air quality problem, in a manner which does not pollute or tend to pollute the waters of the State of Oklahoma, the environment or pose a risk to human health.

"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 Biosolids meets the pathogen reduction requirements of 40 CFR § 503.32 (a);

(B) Class B Biosolids meets the pathogen reduction requirements of 40 CFR § 503.32 (b).

"Bypass" means the intentional or unintentional diversion of waste streams from any portion of a treatment, disposal or collection facility.

"Compliance Testing" means any chemical, physical or bacteriological tests conducted in accordance with permit requirements.

~~"Control tests"~~ means chemical, physical or bacteriological tests, including visual observations made by or under the supervision of an operator to control plant performance, determine the quality of plant effluent and determine stream conditions.

"Control tests" means any chemical, physical or bacteriological tests, including visual observations, performed to aid in operational decisions and to control plant performance.

"CFR" means the Code of Federal Regulations.

"CROMERR" means the Cross-Media Electronic Reporting Rule.

"DEQ" means the Oklahoma Department of Environmental Quality.

"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.

"Generator" or "operator" means authorized person under whose ownership or management authority, biosolids are used or disposed.

"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.

~~"Laboratory checks" means chemical, physical or bacteriological tests, including visual observations made on samples submitted by the operator or other authorized representatives to confirm the quality of the samples or to standardize plant control tests and procedures.~~

"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 the DEQ, or the use of Class A biosolids whose production is permitted by the DEQ.

"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.

"NRCS" means Natural Resources Conservation Service.

"OAC" means Oklahoma Administrative Code.

"OS" means Oklahoma Statutes.

"Oklahoma Water Quality Standards" means the Oklahoma Water Resources Board rules (OAC 785:45) 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.

"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 the DEQ.

"Prior converted cropland" means those croplands as defined or used in the Federal Swampbuster Provisions located at Title 16, USC, §§ 3821 through 3823.

"USC" means United States Code.

"USGS" means United States Geological Survey.

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 July 1, ~~2013~~2014.

252:606-1-6. Spill reporting

(a) **Report.** The owner or operator of a facility or vessel must report to the 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 the 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.

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

252:606-3-3. ~~Draft~~ OPDES permit

~~(a) Appropriate reporting requirements, including a requirement that analyses reported for industrial discharges must be performed by laboratories certified by the DEQ and that analyses reported for municipal discharges must be performed by an operator certified by the DEQ, as specified in this Chapter.~~

(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 the 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.** The DEQ may include in the ~~draft~~ 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 ~~and~~ subject to the DEQ's jurisdiction and pursuant to DEQ rules and regulations.

SUBCHAPTER 5. DISCHARGE PERMIT REQUIREMENTS

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 ~~BOD₅~~ Biological Oxygen Demand - 5 day (BOD₅). A ~~CBOD₅~~ Carbonaceous Biological Oxygen Demand - 5 Day (CBOD₅) of 25 mg/l is considered to be equivalent to a BOD₅ of 30 mg/l.

- (ii) A weekly average of 45 mg/l BOD₅. A CBOD₅ of 40 mg/l is considered to be equivalent to a BOD₅ of 45 mg/l.
 - (iii) The monthly average percent removal for BOD₅ or CBOD₅ 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 BOD₅. A CBOD₅ of 18 mg/l is considered to be equivalent to a BOD₅ of 20 mg/l.
 - (ii) A weekly average of 30 mg/l BOD₅. A CBOD₅ of 25 mg/l is considered to be equivalent to a BOD₅ of 30 mg/l.
 - (iii) The monthly average percent removal for BOD₅ or CBOD₅ 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 BOD₅. A CBOD₅ of 25 mg/l is considered to be equivalent to a BOD₅ of 30 mg/l.
 - (ii) A weekly average of 45 mg/l BOD₅. A CBOD₅ of 40 mg/l is considered to be equivalent to a BOD₅ of 45 mg/l.
 - (iii) The monthly average percent removal for BOD₅ or CBOD₅ 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 5 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 BOD₅, 15 mg/l TSS, and 2 mg/l NH₃-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 BOD₅ 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.

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 the 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 the DEQ approves other users.

(3) **Subsequent use for land application.** The 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 the 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. The 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.** All laboratory analyses required by this Chapter must be performed by an approved laboratory.~~ **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 laboratory that operates under the direction of a university and that is familiar with Oklahoma crops and soils.

(12) **Monitoring wells.** The 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 the 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 the DEQ; or
- (B) disposed at a solid waste landfill permitted by the 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.** The 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 the DEQ;

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

(C) demonstrate the effect of the sludge during four (4) 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 the 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 the DEQ and an agreement that the 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 the DEQ.

SUBCHAPTER 11. TESTS AND REPORTS

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

(a) ~~Certified laboratories~~ **Compliance test results.** Analytical results ~~provided to the DEQ obtained through compliance testing~~ must be from ~~laboratories certified by the DEQ for the parameters reported, and be analyzed according to approved procedures (OAC 252:300, Laboratory Accreditation)~~ an accredited laboratory. ~~Laboratories~~ 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 (DEQ-approved discharge monitoring report form; see 40 CFR § 122.41(L)(4)(i)) to the Water Quality Division at the frequency required in the permit. Report daily average and maximum flow rates in MGD unless the permit specifies otherwise.~~ 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.

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 the 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 ~~laboratory checks and control and compliance tests testing~~, a copy of the monthly operational report and all laboratory work sheets for at least three (3) years. These records must be available for inspection by DEQ personnel.