

Proposed

**State of Kansas
Department of Health and Environment**

Notice of Hearing on Proposed Administrative Regulations

The Kansas Department of Health and Environment, Division of Environment, Bureau of Water, will conduct a public hearing at 10:00 a.m. Tuesday, October 3, 2017, in the Azure Conference Room, Curtis State Office Building, 1000 SW Jackson, Topeka, to consider the adoption of proposed amended regulations K.A.R. 28-16-28b, 28-16-28d, 28-16-28e and 28-16-28f and the adoption of proposed new regulation K.A.R. 28-16-28h regarding Kansas surface water quality standards.

A summary of the proposed regulations and the estimated economic impact follows:

Summary of Regulations:

K.A.R. 28-16-28b. Definitions. Adds definitions for the terms discharger, highest attainable condition, interim criterion, interim designated use, multiple-discharger variance and MDV, pollutant minimization plan and PMP, and reconfiguration activities. Modifies the definitions of the terms background concentration and numeric criteria value, which eliminates table 1e from the "Kansas Surface Water Quality Standards: Tables of Numeric Criteria." Replaces the definition for the term variance. Revises the terms criterion and critical low flow and the general language of the regulation to include reference to proposed new regulation K.A.R. 28-16-28h. Revises the term use attainability analysis, which eliminates a referenced regulation and reflects the current K.S.A. 82a-2001. Adopts the June 15, 2016, "Kansas Implementation Procedures: Surface Water Quality Standards."

K.A.R. 28-16-28d. Surface water classification and use designation. Revises and updates the adoption by reference of 40 C.F.R. 131.10(g).

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K.A.R. 28-16-28e. Surface water quality criteria. Deletes reference to Table 1e from the regulation because the table has been removed from the “Kansas Surface Water Quality Standards: Tables of Numeric Criteria.” Adopts the March 2, 2017, “Kansas Surface Water Quality Standards: Tables of Numeric Criteria” that updates the tables as follows: Revises Table 1a to add a new reference for the ammonia aquatic life criteria. Moves the selenium, total criteria and selenium (V) criteria from the metals section of Table 1a to the Other Inorganic Substances section. A new Table 1c presents new total ammonia acute criterion. This table replaces Table 1c pH- dependent acute aquatic life criteria for total ammonia. A new Table 1d presents new total ammonia chronic criterion. This table replaces Table 1d pH- and temperature-dependent chronic aquatic life criteria for total ammonia early life stages of fish absent. Table 1e has been stricken due to the new proposed ammonia criteria. The title of Table 1f has been revised adding the word “ammonia” preceding “chronic.”

K.A.R 28-16-28f. Administration of surface water quality standards. Updates the regulatory process for variances allowing for individual and multiple discharger variances.

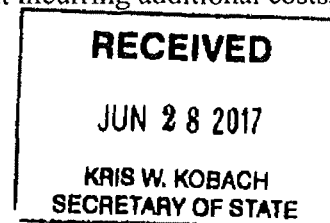
K.A.R. 28-16-28h. Surface water variance register. Adopts the “Kansas Surface Water Quality Standards Variance Register” to document surface water quality standard variances that have been approved by the Secretary and made available to the public.

Economic Impact

Cost to the agency: The proposed regulations will not result in increased costs to the agency.

Cost to the public and regulated community:

Ammonia Acute and Chronic Aquatic Life Criteria: From KDHE’s analyses, the majority of mechanical wastewater treatment plants (WWTP) can meet, without incurring additional costs,



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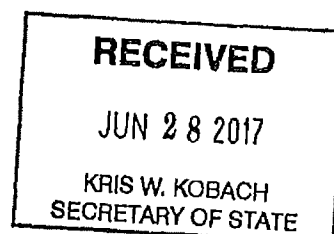
the new acute and chronic ammonia limits recommended by the Environmental Protection Agency (EPA) in the Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater 2013.

Sampling and monitoring is required of mechanical WWTP. Additional costs for sample collection and analysis for ammonia may be incurred if the sampling frequency is increased.

Municipalities with WWTP lagoon systems may incur a significant financial burden if they are required to implement technological and/or mechanical upgrades to meet the new ammonia criteria limits. If sampling and monitoring is required by WWTP lagoon systems, additional costs may be incurred.

K.A.R. 28-16-28f(d) Variances: If the water quality standards (WQS) variance regulations are not adopted, significant costs could be placed upon the regulated community because they would not have the flexibility to request a WQS variance if needed. For example, if the ammonia criteria is approved without the accompanying variance provisions, the financial burden of implementation would significantly impact municipalities with wastewater lagoons that cannot meet the new proposed ammonia criteria. The state will be able to implement the proposed ammonia criteria with minimal financial impact on the regulated community with the concurrent adoption of the proposed WQS variance regulations and the "Multiple-discharger Wastewater Lagoon Ammonia Variance" as written in the "Kansas Surface Water Quality Standards Variance Register." There may be costs incurred by larger waste water treatment lagoon systems that do not meet the proposed ammonia criteria and are not eligible to receive a variance.

For all other proposed regulatory changes there are no known additional costs to the regulated communities or the public.



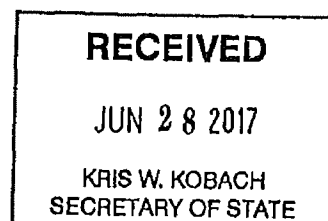
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Cost to other governmental agencies or units: There are no known additional costs to other governmental agencies or units.

The time period between the publication of this notice and the scheduled hearing constitutes a 60-day public comment period for the purpose of receiving written public comments on the proposed regulations. All interested parties may submit written comments prior to 5:00 p.m. on the day of the hearing to Julia Young, Kansas Department of Health and Environment, Bureau of Water, 1000 SW Jackson, Suite 420, Topeka, 66612-1367, by email to Julia.Young@ks.gov, or by fax to 785-296-0086. During the hearing, all interested parties will be given a reasonable opportunity to present their views orally on the proposed regulations as well as an opportunity to submit their written comments. In order to give each individual an opportunity to present their views, it may be necessary for the hearing officer to request that each presenter limit an oral presentation to an appropriate time frame.

Complete copies of the proposed regulations and the corresponding regulatory impact statement may be obtained from the Bureau of Water website at <http://www.kdheks.gov/water/index.html> or by contacting Julia Young at the address above, 785-296-5508 or fax 785-296-0086. Questions pertaining to the proposed regulations should be directed to Julia Young at the contact information above.

Any individual with a disability may request accommodation in order to participate in the public hearing and may request the proposed regulations and the regulatory impact statement in an accessible format. Requests for accommodation to participate in the hearing should be made at least five working days in advance of the hearing by contacting Julia Young.



Susan Mosier, MD, MBA, FACS
Secretary and State Health Officer

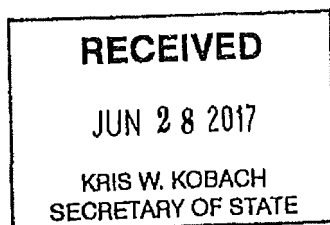
28-16-28b. Definitions. As used in K.A.R. 28-16-28b through ~~28-16-28g~~ 28-16-28h, each of the following terms shall have the meaning specified in this regulation: (a) "Alluvial aquifer" means the sediment that is associated with and deposited by a stream and that contains water capable of being produced from a well.

(b) "Alternate low flow" means a low flow value, which is an alternate to the 7Q10 flow, that is based seasonally, hydrologically, or biologically, or a low flow determined through a water assurance district. Wherever used in this regulation in the context of mixing zones, the term shall refer to a minimum amount of streamflow occurring immediately upstream of a wastewater discharge and available, in whole or in part, for dilution and assimilation of wastewater discharges.

(c) "Antidegradation" means the regulatory actions and measures taken to prevent or minimize the lowering of water quality in surface waters of the state, including those streams, lakes, and wetlands in which existing water quality exceeds the level required for maintenance and protection of the existing uses.

(d) "Artificial sources" means sources of pollution that result from human activities and that can be abated by construction of control structures, modification of operating practices, complete restraint of activities, or any combination of these methods.

(e) "Background concentration" means the concentration of any elemental parameter listed in tables 1a, 1b, 1c, and 1d, ~~and 1e~~ of the "Kansas surface water quality standards: tables of numeric criteria," which is adopted by reference in K.A.R. 28-16-28e, or any elemental substance meeting the definition of pollutant in this regulation, that occurs in a surface water immediately upstream of a point source or nonpoint source under consideration and is from



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natural sources. The list of background concentration determinations for classified waterbodies of the state is contained in table 1h of the "Kansas surface water quality standards: tables of numeric criteria."

(f) "Base flow" means that portion of a stream's flow contributed by sources of water other than precipitation runoff. Wherever used in this regulation in the context of stream classification, the term shall refer to a fair weather flow sustained primarily by springs or groundwater seepage, wastewater discharges, irrigation return flows, releases from reservoirs, or any combination of these factors.

(g) "Bioaccumulation" means the accumulation of toxic substances in plant or animal tissue through either bioconcentration or biomagnification.

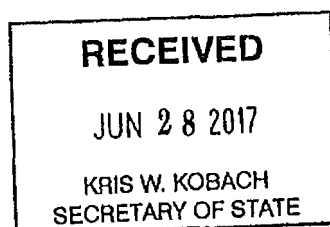
(h) "Bioassessment methods and procedures" means the use of biological methods of assessing surface water quality, including field investigations of aquatic organisms and laboratory or field aquatic toxicity tests.

(i) "Bioconcentration" means the concentration and incorporation of toxic substances into body tissues from ambient sources.

(j) "Biomagnification" means the transport of toxic substances through the food chain through successive cycles of eating and being eaten and through the subsequent accumulation and concentration of these substances in higher-order consumers and predators.

(k) "Biota" means the animal and plant life and other organisms of a given geographical region.

(l) "Carcinogenic" means having the property of inducing the production of cancerous



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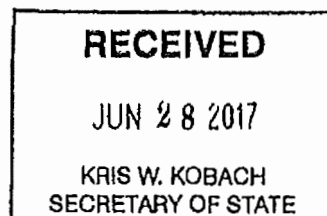
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cells in organisms.

(m) "Classified surface water" means any surface water or surface water segment that supports or, in the absence of artificial sources of pollution, would support one or more of the designated uses of surface water defined in K.A.R. 28-16-28d or K.S.A. 82a-2001, and amendments thereto, and that meets the criteria for classification given in K.A.R. 28-16-28d.

(n) "Compliance schedule" means any provision in a discharge permit, license, or enforceable order issued by the department pursuant to the federal clean water act or K.S.A. 65-165 et seq., and amendments thereto, that, for the purposes of meeting water quality-based effluent limitations, technology-based limits, and effluent limitations determined by the secretary or specified in Kansas statutes and regulations, provides a specified period of time for the construction or renovation of a wastewater treatment facility and the completion of any related scientific or engineering studies, reports, plans, design specifications, or other submittals required by the department.

(o) "Condition of acute toxicity" means any concentration of a toxic substance that exceeds the applicable acute criterion for aquatic life support specified in K.A.R. 28-16-28e or, for substances not listed in K.A.R. 28-16-28e or for mixtures of toxic substances, any concentration that exceeds 0.3 acute toxic units (TU_a), where one TU_a is equal to 100 divided by the median lethal concentration (LC_{50}). The concentration at which acute toxicity exists shall be determined through laboratory toxicity tests conducted in accordance with the EPA's "methods for measuring the acute toxicity of effluents and receiving waters to freshwater and marine organisms."



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(p) "Condition of chronic toxicity" means any concentration of a toxic substance that exceeds the applicable chronic criterion for aquatic life support specified in K.A.R. 28-16-28e or, for substances not listed in K.A.R. 28-16-28e or for mixtures of toxic substances, any concentration that exceeds 1.0 chronic toxic unit (TU_c), where one TU_c is equal to 100 divided by inhibition concentration 25 (IC_{25}). The concentration at which chronic toxicity exists shall be determined through laboratory toxicity tests conducted in accordance with the EPA's "short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms."

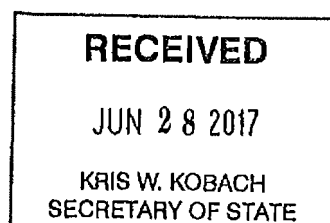
(q) "Criterion" means any numerical element or narrative provision that represents an enforceable water quality condition specified in K.A.R. 28-16-28b through ~~28-16-28g~~ 28-16-28h.

(r) "Critical low flow" means the minimum amount of streamflow immediately upstream of a point source discharge that will be used to calculate the quantity of pollutants that the point source discharge may be permitted to discharge without exceeding water quality criteria specified in K.A.R. 28-16-28b through ~~28-16-28g~~ 28-16-28h. The critical low flow may be the 7Q10 flow or the alternate low flow as defined in this regulation.

(s) "Department" means Kansas department of health and environment.

(t) "Designated use" means any of the uses specifically attributed to surface waters of the state in K.A.R. 28-16-28d or K.S.A. 82a-2001, and amendments thereto.

(u) "Digression" means an actual ambient concentration of a pollutant that does not meet the numeric criteria value for that pollutant.



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(v) "Discharge" means the release of effluent, either directly or indirectly, into surface waters of the state.

(w) "Discharge design flow" means either of the following:

(1) The anticipated wastewater flow for the next permit cycle determined by the department for an industrial wastewater treatment facility, as defined in K.A.R. 28-16-56c; or

(2) the wastewater treatment capacity of a facility approved by the secretary for other wastewater treatment facilities or systems.

(x) "Discharger" means a person or facility that is responsible for the release of effluent into surface waters of the state.

(y) "Duration of digression" means the period of time over which pollutant concentrations can be averaged, including the time span during which aquatic life can be exposed to elevated levels of pollutants without harm.

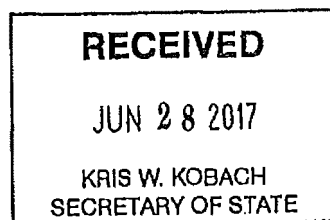
(y) (z) "Ecological integrity" means the natural or unimpaired structure and functioning of an aquatic or terrestrial ecosystem.

(z) (aa) "Effluent" means the sewage or other wastewater discharged from an artificial source.

(aa) (bb) "EPA" means United States environmental protection agency.

(bb) (cc) "Escherichia coli" means a subset of the coliform group that is part of the normal intestinal flora in humans and animals and is a direct indicator of fecal contamination in water.

(ee) (dd) "Exceptional state waters" means any of the surface waters or surface water



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segments that are of remarkable quality or of significant recreational or ecological value, are listed in the surface water register as defined in this regulation, and are afforded the level of water quality protection under the antidegradation provisions of K.A.R. 28-16-28c and the mixing zone provisions of K.A.R. 28-16-28c.

~~(dd)~~ (ee) "Excursion from numeric criteria value" means the digression of a pollutant exceeding its numeric criteria value beyond the designated duration of digression.

~~(ee)~~ (ff) "Existing use" means any of the designated uses described in K.A.R. 28-16-28d or K.S.A. 82a-2001, and amendments thereto, known to have occurred in, or to have been made of, a surface water or surface water segment on or after November 28, 1975.

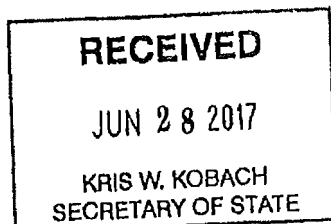
~~(ff)~~ (gg) "Federal clean water act" means the federal water pollution prevention and control act, 33 U.S.C. Section 1251 et seq., as in effect on January 1, 1998.

~~(gg)~~ (hh) "Frequency of digression" means the number of times that an excursion from numeric criteria value can occur over time without impairing the designated uses of the water.

~~(hh)~~ (ii) "General purpose waters" means any classified surface water that is not classified as an outstanding national resource water or an exceptional state water.

~~(ii)~~ (jj) "Groundwater" means water located under the surface of the land that is or can be the source of supply for wells, springs, or seeps or that is held in aquifers or the soil profile.

(kk) "Highest attainable condition" and "HAC" mean the achievable goal of a variance, according to K.A.R. 28-16-28f(d)(5), that reflects the modified designated use and criterion, designated use, or criterion that is applicable throughout the term of a variance.



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~~(jj)~~ (11) “Inhibition concentration 25” and “IC₂₅” mean a point estimate of the toxicant concentration that would cause a 25 percent reduction in a nonlethal biological measurement of the test organisms, including reproduction and growth.

~~(mm)~~ “Interim criterion” means a temporary criterion.

~~(nn)~~ “Interim designated use” means a temporary designated use.

~~(kk)~~ (oo) “Kansas antidegradation policy,” dated August 6, 2001 and hereby adopted by reference, means the department’s written policy used to prevent or minimize the lowering of water quality in surface waters of the state.

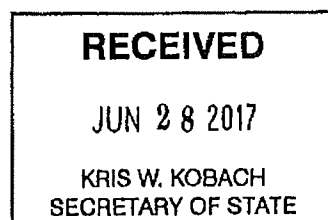
~~(H)~~ (pp) “Kansas implementation procedures: surface water quality standards,” dated ~~October 1, 2012~~ June 15, 2016 and hereby adopted by reference, means the department’s written procedures used for carrying out specific provisions of surface water quality standards, available upon request from the department’s division of environment.

~~(mm)~~ (qq) “Maximum contaminant level” means any of the enforceable standards for finished drinking water quality specified in 40 C.F.R. 141.11, 141.13, and 141.61 through 141.66, dated July 1, 2012.

~~(nn)~~ (rr) “Median lethal concentration” means the concentration of a toxic substance or a mixture of toxic substances calculated to be lethal to 50 percent of the population of test organisms in an acute toxicity test.

~~(ee)~~ (ss) “Microfibers per liter” and “μfibers/L” mean the number of microscopic particles with a length-to-width ratio of 3:1 or greater present in a volume of one liter.

~~(pp)~~ (tt) “Microgram per liter” and “μg/L” mean the concentration of a substance at



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which one one-millionth of a gram (10^{-6} g) of the substance is present in a volume of one liter.

(qq) (uu) "Milligram per liter" and "mg/L" mean the concentration of a substance at which one one-thousandth of a gram (10^{-3} g) of the substance is present in a volume of one liter.

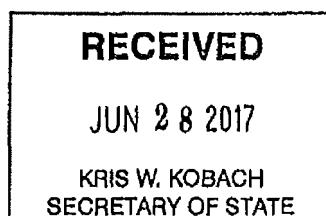
(rr) (vv) "Mixing zone" means the designated portion of a stream or lake where a discharge is incompletely mixed with the receiving surface water and where, in accordance with K.A.R. 28-16-28e, concentrations of certain pollutants may legally exceed chronic water quality criteria associated with the established designated uses that are applied in most other portions of the receiving surface water.

(ss) (ww) "Mutagenic" means having the property of directly or indirectly causing a mutation.

(xx) "Multiple-discharger variance" and "MDV" mean a term-limited variance for more than one discharger that is issued for a specified criterion or pollutant to achieve the highest attainable condition.

(tt) (yy) "Nonpoint source" means any activity that is not required to have a national pollutant discharge elimination system permit and that results in the release of pollutants to waters of the state. This release may result from precipitation runoff, aerial drift and deposition from the air, or the release of subsurface brine or other contaminated groundwaters to surface waters of the state.

(uu) (zz) "Numeric criteria value" means any of the values listed in tables 1a, 1b, 1c, 1d, 1e, 1g, 1h, 1i, 1j, and 1k of the "Kansas surface water quality standards: tables of numeric criteria."



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~~(vv)~~ (aaa) “Outstanding national resource water” means any of the surface waters or surface water segments of extraordinary recreational or ecological significance identified in the surface water register, as defined this regulation, and afforded the highest level of water quality protection under the antidegradation provisions and the mixing zone provisions of K.A.R. 28-16-28c.

~~(ww)~~ (bbb) “pH” means the common logarithm of the reciprocal of the hydrogen ion concentration measured in moles per liter, expressed on a scale that ranges from zero to 14, with values less than seven being more acidic and values greater than seven being more alkaline.

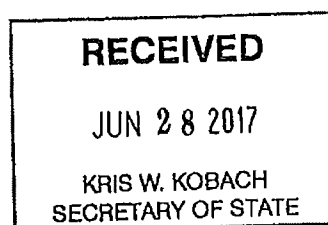
~~(xx)~~ (ccc) “Picocurie per liter” and “pCi/L” mean a volumetric unit of radioactivity equal to 2.22 nuclear transformations per minute per liter.

~~(yy)~~ (ddd) “Point source” means any discernible, confined, and discrete conveyance from which pollutants are or could be discharged.

~~(zz)~~ (eee) “Pollutant” means any physical, biological, or chemical conditions, substances, or combination of substances released into surface waters of the state that results in surface water pollution, as defined in this regulation.

(fff) “Pollutant minimization plan” and “PMP” mean a structured set of activities to improve processes and pollutant controls that prevent and reduce pollutant levels, including any cost-effective process for reducing pollutant levels, pollution prevention, treatment, best management practices, and other control mechanisms.

~~(aaa)~~ (ggg) “Potable water” means water that is suitable for drinking and cooking purposes in terms of both human health and aesthetic considerations.



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~~(bbb)~~ (hhh) "Precipitation runoff" means the rainwater or the meltwater derived from snow, hail, sleet, or other forms of atmospheric precipitation that flows by gravity over the surface of the land and into streams, lakes, or wetlands.

~~(eee)~~ (iii) "Presedimentation sludge" means a slurry or suspension of residual solid materials derived from an initial step in the production of potable water. This term shall include residual solids originating from the raw water supply used for industrial or other nonpotable water purposes, before the addition of any artificial materials not typically used in the production of potable water. The solid materials shall include sand, silt, and other easily settleable particles originating from the raw water supply.

~~(ddd)~~ (jjj) "Private surface water" means any freshwater reservoir or pond that is both located on and completely bordered by land under common private ownership.

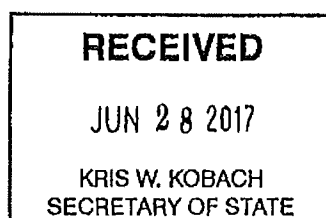
~~(eee)~~ (kkk) "Public swimming area" means either of the following:

(1) Any classified surface water that is posted for swimming by a federal, state, or local government that has jurisdiction over the land adjacent to that particular body of water; or

(2) any privately owned or leased body of water that is open and accessible to the public and is intended for swimming.

(lll) "Reconfiguration activities" means actions that beneficially reshape, remodel, or otherwise restructure the physical setting and characteristics of a surface water of the state.

~~(fff)~~ (mmm) "Seven-day, ten-year low flow" and "7Q10 flow" mean the seven-day average low flow having a recurrence frequency of once in 10 years, as statistically determined from historical flow data. Where used in this regulation in the context of mixing zones, these



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terms shall refer to the minimum amount of streamflow occurring immediately upstream of a wastewater discharge and available, in whole or in part, for dilution or assimilation of wastewater discharges.

~~(ggg)~~ (nnn) "Site-specific criterion" means any criterion applicable to a given classified surface water segment and developed for the protection of the designated uses of that segment alone.

~~(hhh)~~ (ooo) "Streamflow" means the volume of water moving past a stream cross-sectional plane per unit of time.

~~(iii)~~ (ppp) "Surface water pollution" ~~means and~~ "pollution" mean any of the following:

(1) Contamination or other alteration of the physical, chemical, or biological properties of the surface waters of the state, including changes in temperature, taste, odor, turbidity, or color of the waters;

(2) discharges of gaseous, liquid, solid, radioactive, microbiological, or other substances into surface waters in a manner that could create a nuisance or render these waters harmful, detrimental, or injurious to any of the following:

(A) Public health, safety, or welfare;

(B) domestic, industrial, agricultural, recreational, or other designated uses; or

(C) livestock, domestic animals, or native or naturalized plant or animal life; or

(3) any discharge that will or is likely to exceed state effluent limitations predicated upon technology-based effluent standards or water quality-based standards.

~~(jjj)~~ (qqq) "Surface water register" means a list of the state's major classified surface

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waters, including a listing of waters recognized as outstanding national resource waters or exceptional state waters, and the surface water use designations for each classified surface water, periodically updated and published by the department pursuant to K.A.R. 28-16-28d and K.A.R. 28-16-28f. The surface water register, published as the “Kansas surface water register,” is adopted by reference in K.A.R. 28-16-28g.

~~(kkk)~~ (rrr) “Surface water segment” means a delineated portion of a stream, lake, or wetland.

~~(HH)~~ (sss) “Surface waters” means the following:

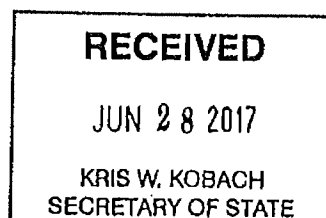
(1) Streams, including rivers, creeks, brooks, sloughs, draws, arroyos, canals, springs, seeps, and cavern streams, and any alluvial aquifers associated with these surface waters;

(2) lakes, including oxbow lakes and other natural lakes and man-made reservoirs, lakes, and ponds; and

(3) wetlands, including swamps, marshes, bogs, and similar areas that are inundated or saturated by surface water or groundwater at a frequency and a duration that are sufficient to support, and under normal circumstances that do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

~~(mmm)~~ (ttt) “Surface waters of the state” means all surface waters occurring within the borders of the state of Kansas or forming a part of the border between Kansas and one of the adjoining states.

~~(nnn)~~ (uuu) “Teratogenic” means having the property of causing abnormalities that originate from impairment of an event that is typical in embryonic or fetal development.



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~~(ooo)~~ (vvv) “Thirty-day, ten-year low flow” and “30Q10 flow” mean the 30-day average low flow having a recurrence frequency of once in 10 years, as statistically determined from historical flow data. Where used in this regulation in the context of mixing zones, these terms shall refer to the minimum amount of streamflow occurring immediately upstream of a wastewater discharge and available, in whole or in part, for dilution or assimilation of wastewater discharges.

~~(ppp)~~ (www) “Toxic substance” means any substance that produces deleterious physiological effects in humans, animals, or plants.

~~(qqq)~~ (xxx) “Turbidity” means the cloudiness of water as measured by optical methods of nephelometry and expressed in standard nephelometric units.

~~(rrr)~~ (yyy) “Use attainability analysis” means a study conducted or accepted by the department that is designed to determine whether or not a surface water or surface water segment supports, or is capable of supporting in the absence of artificial sources of pollution, one or more of the designated uses defined in ~~K.A.R. 28-16-28d~~ or K.S.A. 2016 Supp. 82a-2001, and amendments thereto.

~~(sss)~~ (zzz) “Variance” means ~~the department's written approval and authorization of a proposed action that knowingly will result in a lack of conformity with one or more of the criteria of K.A.R. 28-16-28e but that is deemed necessary based on the provisions of 40 C.F.R. 131.10(g), dated July 1, 2012, which is hereby adopted by reference, except that the phrase “federal clean water” shall be inserted before the word “act.” Variances shall be administered by the department in accordance with K.A.R. 28-16-28f~~ a time-limited designated use and criterion

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that reflects the highest attainable condition as an alternative to one or more of the criteria specified in K.A.R. 28-16-28e, as implemented by the department in accordance with K.A.R. 28-16-28f.

(~~ttt~~) (aaaa) “Water-effect ratio” and “WER” mean the numerical toxicity, including median lethal concentration and inhibition concentration 25, of a chemical pollutant diluted in water from a given stream, lake, or wetland divided by the numerical toxicity of the same pollutant diluted in laboratory water.

(~~uuu~~) (bbbb) “Water quality certification” means the department's written finding that a proposed action that impacts water quality will comply with the terms and conditions of the Kansas surface water quality standards.

(~~vvv~~) (cccc) “Whole-effluent toxicity limitation” means any restriction imposed by the department on the overall acute or chronic toxicity of an effluent discharged to a surface water.

(~~www~~) (dddd) “Zone of initial dilution” means the region of a surface water in the immediate vicinity of a discharge where acute and chronic criteria may be exceeded.

(Authorized by K.S.A. ~~2014~~ 2016 Supp. 65-171d and K.S.A. 65-171m; implementing K.S.A. 65-165, K.S.A. ~~2014~~ 2016 Supp. 65-171d, K.S.A. 65-171m, and K.S.A. ~~2014~~ 2016 Supp. 82a-2001; effective May 1, 1986; amended Aug. 29, 1994; amended July 30, 1999; amended Nov. 3, 2000; amended Aug. 31, 2001; amended Jan. 3, 2003; amended Oct. 24, 2003; amended Jan. 28, 2005; amended March 20, 2015; amended P- _____).

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28-16-28d. Surface water classification and use designation. (a) Surface water classification.

Surface waters shall be classified as follows:

(1) Classified stream segments shall be those stream segments defined in K.S.A. 2016 Supp. 82a-2001, and amendments thereto.

(2) Classified surface waters other than classified stream segments shall be defined as follows:

(A) Classified lakes shall be all lakes owned by federal, state, county, or municipal authorities and all privately owned lakes that serve as public drinking water supplies or that are open to the general public for primary or secondary contact recreation.

(B) Classified wetlands shall be the following:

(i) All wetlands owned by federal, state, county, or municipal authorities;

(ii) all privately owned wetlands open to the general public for hunting, trapping, or other forms of secondary contact recreation; and

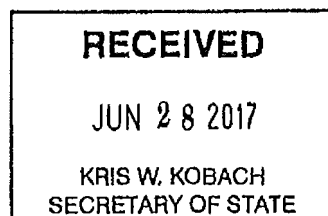
(iii) all wetlands classified as outstanding national resource waters or exceptional state waters, or designated as special aquatic life use waters according to subsection (d).

Wetlands created for the purpose of wastewater treatment shall not be considered classified wetlands.

(C) Classified ponds shall be all ponds owned by federal, state, county, or municipal authorities and all privately owned ponds that impound water from a classified stream segment as defined in paragraph (a)(1).

(b) Designated uses of classified surface waters other than classified stream segments.

The designated uses of classified surface waters other than classified stream segments shall be



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defined as follows:

(1) "Agricultural water supply use" means the use of classified surface waters other than classified stream segments for agricultural purposes, including the following:

(A) "Irrigation," which means the withdrawal of classified surface waters other than classified stream segments for application onto land; and

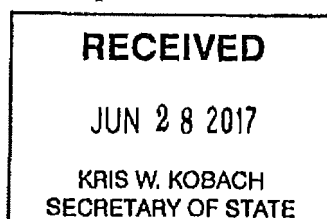
(B) "livestock watering," which means the provision of classified surface waters other than classified stream segments to livestock for consumption.

(2) "Aquatic life support use" means the use of classified surface waters other than classified stream segments for the maintenance of the ecological integrity of lakes, wetlands, and ponds, including the sustained growth and propagation of native aquatic life; naturalized, important, recreational aquatic life; and indigenous or migratory semiaquatic or terrestrial wildlife directly or indirectly dependent on classified surface waters other than classified stream segments for survival.

(A) "Special aquatic life use waters" means either classified surface waters other than classified stream segments that contain combinations of habitat types and indigenous biota not found commonly in the state or classified surface waters other than classified stream segments that contain representative populations of threatened or endangered species.

(B) "Expected aquatic life use waters" means classified surface waters other than classified stream segments containing habitat types and indigenous biota commonly found or expected in the state.

(C) "Restricted aquatic life use waters" means classified surface waters other than



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classified stream segments containing indigenous biota limited in abundance or diversity by the physical quality or availability of habitat, due to natural deficiencies or artificial modifications, compared to more suitable habitats in adjacent waters.

(3) "Domestic water supply use" means the use of classified surface waters other than classified stream segments, after appropriate treatment, for the production of potable water.

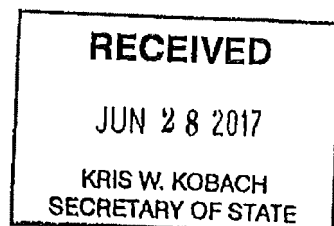
(4) "Food procurement use" means the use of classified surface waters other than classified stream segments for obtaining edible forms of aquatic or semiaquatic life for human consumption.

(5) "Groundwater recharge use" means the use of classified surface waters other than classified stream segments for replenishing fresh or usable groundwater resources. This use may involve the infiltration and percolation of classified surface waters other than classified stream segments through sediments and soils or the direct injection of classified surface waters other than classified stream segments into underground aquifers.

(6) "Industrial water supply use" means the use of classified surface waters other than classified stream segments for nonpotable purposes by industry, including withdrawals for cooling or process water.

(7) "Recreational use" means the use of classified surface waters other than classified stream segments for primary contact recreation or secondary contact recreation.

(A) "Primary contact recreational use for classified surface waters other than classified stream segments" means the use of classified surface waters other than classified stream segments for recreation on and after April 1 through October 31 of each year, during which a



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person is immersed to the extent that some inadvertent ingestion of water is probable. This use shall include boating, mussel harvesting, swimming, skin diving, waterskiing, and windsurfing.

(i) "Primary contact recreational use: swimming beach" shall apply to those classified surface waters other than classified stream segments that have posted public swimming areas. These waters shall present a risk of human illness that is no greater than 0.8 percent.

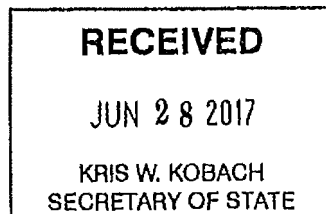
(ii) "Primary contact recreational use: public access" shall apply to those classified surface waters other than classified stream segments where full body contact can occur and that are, by law or written permission of the landowner, open to and accessible by the public. These waters shall present a risk of human illness that is no greater than 1.0 percent.

(iii) "Primary contact recreational use: restricted access" shall apply to those classified surface waters other than classified stream segments where full body contact can occur and that are not open to and accessible by the public under Kansas law. These waters shall present a risk of human illness that is no greater than 1.2 percent.

(B) "Secondary contact recreational use for classified surface waters other than classified stream segments" means recreation during which the ingestion of classified surface waters other than classified stream segments is not probable. This use shall include wading, fishing, trapping, and hunting.

(i) "Secondary contact recreational use: public access" shall apply to classified surface waters other than classified stream segments where the surface water is, by law or written permission of the landowner, open to and accessible by the public.

(ii) "Secondary contact recreational use: restricted access" shall apply to classified



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surface waters other than classified stream segments where the surface water is not open to and accessible by the public under Kansas law.

(c) Designated uses of classified stream segments. The designated uses of classified stream segments shall be those defined in K.S.A. 2016 Supp. 82a-2001, and amendments thereto.

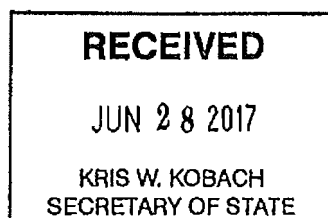
(d) Assignment of uses to surface waters.

(1) (A) Classified surface waters shall be designated for uses based upon the results of use attainability analyses conducted in accordance with K.S.A. 2016 Supp. 82a-2005, and amendments thereto. The provisions of the federal water quality standards regulation, 40 C.F.R. 131.10(g), as adopted by reference in ~~K.A.R. 28-16-28b(sss)~~ paragraph (d)(1)(B), shall be followed.

(B) 40 C.F.R. 131.10(g), dated July 1, 2012, is hereby adopted by reference, except that the phrase "federal clean water" shall be inserted before the word "act."

(2) Classified surface waters and their designated uses shall be identified and listed in the "Kansas surface water register," as adopted by reference in K.A.R. 28-16-28g.

(3) The use designations for classified streams, lakes, wetlands, and ponds not listed in the surface water register shall be determined by the secretary on a case-by-case basis in accordance with paragraph (d)(1). (Authorized by K.S.A. ~~2014~~ 2016 Supp. 65-171d, 82a-2005, and 82a-2010; implementing K.S.A. ~~2014~~ 2016 Supp. 65-171d, 82a-2002, 82a-2003, 82a-2004, and 82a-2005; effective May 1, 1986; amended, T-87-8, May 1, 1986; amended May 1, 1987; amended Aug. 29, 1994; amended July 30, 1999; amended Aug. 31, 2001; amended Jan. 3, 2003;



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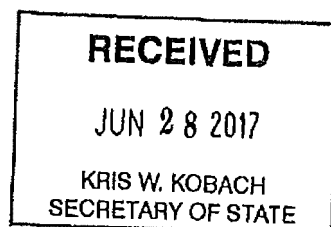
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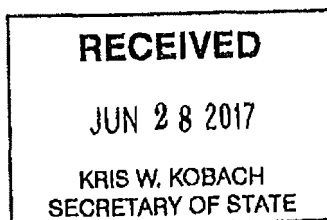
28-16-28e. Surface water quality criteria. (a) Criteria development guidance. The development of surface water quality criteria for substances not listed in these standards shall be guided by water quality criteria published by the EPA. If the department finds that the criteria listed in this regulation are underprotective or overprotective for a given surface water segment, appropriate site-specific criteria may be developed and applied by the department, in accordance with K.A.R. 28-16-28f, using bioassessment methods or other related scientific procedures, including those procedures consistent with the EPA's "water quality standards handbook," second edition, as published in August 1994, or other department-approved methods.

(b) General criteria for surface waters. The following criteria shall apply to all surface waters, regardless of classification:

(1) Surface waters shall be free, at all times, from the harmful effects of substances that originate from artificial sources of pollution and that produce any public health hazard, nuisance condition, or impairment of a designated use.

(2) Hazardous materials derived from artificial sources, including toxic substances, radioactive isotopes, and infectious microorganisms derived from point sources or nonpoint sources, shall not occur in surface waters at concentrations or in combinations that jeopardize the public health or the survival or well-being of livestock, domestic animals, terrestrial wildlife, or aquatic or semiaquatic life.

(3) Surface waters shall be free of all discarded solid materials, including trash, garbage, rubbish, offal, grass clippings, discarded building or construction materials, car bodies, tires, wire, and other unwanted or discarded materials. The placement of stone and concrete rubble for bank stabilization shall be acceptable to the department if all other required permits are obtained



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(4) Surface waters shall be free of floating debris, scum, foam, froth, and other floating materials directly or indirectly attributable to artificial sources of pollution.

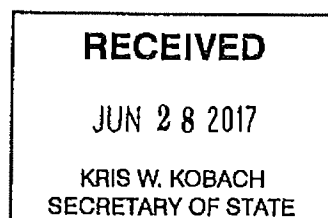
(5) Oil and grease from artificial sources shall not cause any visible film or sheen to form upon the surface of the water or upon submerged substrate or adjoining shorelines, nor shall these materials cause a sludge or emulsion to be deposited beneath the surface of the water or upon the adjoining shorelines.

(6) Surface waters shall be free of deposits of sludge or fine solids attributable to artificial sources of pollution.

(7) Taste-producing and odor-producing substances of artificial origin shall not occur in surface waters at concentrations that interfere with the production of potable water by conventional water treatment processes, that impart an unpalatable flavor to edible aquatic or semiaquatic life or terrestrial wildlife, or that result in noticeable odors in the vicinity of surface waters.

(8) The natural appearance of surface waters shall not be altered by the addition of color-producing or turbidity-producing substances of artificial origin.

(9) In stream segments where background concentrations of naturally occurring substances, including chlorides and sulfates, exceed the water quality criteria listed in table 1a of the "Kansas surface water quality standards: tables of numeric criteria," as adopted by reference in subsection (c), ~~at ambient flow~~, the existing water quality shall be maintained, and the newly established numeric criteria shall be the background concentration. Background concentrations



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shall be established using the methods outlined in the “Kansas implementation procedures: surface water quality standards,” as adopted by reference in K.A.R. 28-16-28b, and available upon request from the department.

(c) Application of criteria for designated uses of surface waters.

(1) The numeric criteria in tables 1a, 1b, 1c, and 1d, ~~and 1e~~ of the “Kansas surface water quality standards: tables of numeric criteria” shall not apply if the critical low flow is less than 0.03 cubic meter per second (1.0 cubic foot per second) for waters designated as expected aquatic life use waters and restricted aquatic life use waters, unless studies conducted or approved by the department show that water present during periods of no flow, or flow below critical low flow, provides important refuges for aquatic life and permits biological recolonization of intermittently flowing segments.

(2) The numeric criteria in tables 1a, 1b, 1c, and 1d, ~~and 1e~~ of the “Kansas surface water quality standards: tables of numeric criteria” shall not apply if the critical low flow is less than 0.003 cubic meter per second (0.1 cubic foot per second) for waters designated as special aquatic life use waters, unless studies conducted or approved by the department show that water present during periods of no flow, or flow below critical low flow, provides important refuges for aquatic life and permits biological recolonization of intermittently flowing segments.

(3) Each digression shall be assessed by the secretary for the purposes of section 303(d) of the federal clean water act, with consideration of acceptable duration and frequency of the digression and representation of actual ambient conditions by environmental monitoring data, as specified in the “Kansas implementation procedures: surface water quality standards.”



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(d) Criteria for designated uses of surface waters. The following criteria shall apply to all classified surface waters for the indicated designated uses:

(1) Agricultural water supply use. The water quality criteria for irrigation and livestock watering specified in table 1a of the "Kansas surface water quality standards: tables of numeric criteria" shall not be exceeded outside of mixing zones due to artificial sources of pollution.

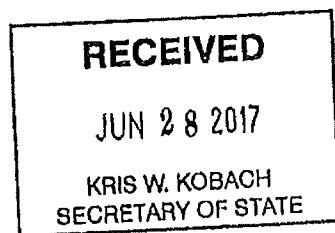
(2) Aquatic life support use.

(A) Nutrients. The introduction of plant nutrients into streams, lakes, or wetlands from artificial sources shall be controlled to prevent the accelerated succession or replacement of aquatic biota or the production of undesirable quantities or kinds of aquatic life.

(B) Suspended solids. Suspended solids added to surface waters by artificial sources shall not interfere with the behavior, reproduction, physical habitat, or other factors related to the survival and propagation of aquatic or semiaquatic life or terrestrial wildlife. In the application of this provision, suspended solids associated with discharges of presedimentation sludge from water treatment facilities shall be deemed noninjurious to aquatic and semiaquatic life and terrestrial wildlife if these discharges fully meet the requirements of paragraphs (b)(6) and (8) and paragraph (d)(2)(D).

(C) Temperature.

(i) Heat of artificial origin shall not be added to a surface water in excess of the amount that will raise the temperature of the water beyond the mixing zone more than 3° C above natural conditions. Additionally, a discharge to a receiving water shall not lower the temperature of the water beyond the mixing zone more than 3° C below natural conditions. The normal daily and



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seasonal temperature variations occurring within a surface water before the addition of heated or cooled water of artificial origin shall be maintained.

(ii) Temperature criteria applicable to industrial cooling water recycling reservoirs that meet the requirements for classification specified in K.A.R. 28-16-28d shall be established by the secretary on a case-by-case basis to protect the public health, safety, or the environment.

(D) Toxic substances.

(i) Conditions of acute toxicity shall not occur in classified surface waters outside of zones of initial dilution, nor shall conditions of chronic toxicity occur in classified surface waters outside of mixing zones.

(ii) Acute criteria for the aquatic life support use specified in tables 1a, 1b, and 1c of the "Kansas surface water quality standards: tables of numeric criteria" shall apply beyond the zone of initial dilution. Chronic criteria for the aquatic life support use specified in tables 1a, 1b, and 1d, and 1e of the "Kansas surface water quality standards: tables of numeric criteria" shall apply beyond the mixing zone.

(iii) If a discharge contains a toxic substance that lacks any published criteria for the aquatic life support use, or if a discharge contains a mixture of toxic substances capable of additive or synergistic interactions, bioassessment methods and procedures shall be specified by the department to establish whole-effluent toxicity limitations that are consistent with paragraph (d)(2)(D)(i).

(3) Domestic water supply use.

(A) Except as provided in paragraph (d)(3)(B), the criteria listed in table 1a of the

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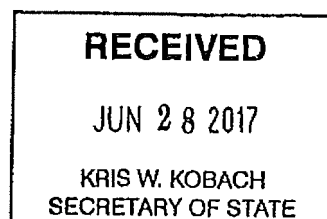
“Kansas surface water quality standards: tables of numeric criteria” for domestic water supply use shall not be exceeded at any point of domestic water supply diversion.

(B) In stream segments where background concentrations of naturally occurring substances, including chlorides and sulfates, exceed the domestic water supply criteria listed in table 1a of the “Kansas surface water quality standards: tables of numeric criteria,” due to intrusion of mineralized groundwater, the existing water quality shall be maintained, and the newly established numeric criteria for domestic water supply shall be the background concentration. Background concentrations shall be established using the methods outlined in the “Kansas implementation procedures: surface water quality standards,” available upon request from the department.

(C) Any substance derived from an artificial source that, alone or in combination with other synthetic or naturally occurring substances, causes toxic, carcinogenic, teratogenic, or mutagenic effects in humans shall be limited to nonharmful concentrations in surface waters. Unless site-specific water quality conditions warrant the promulgation of more protective criteria under the provisions of subsection (a) of this regulation and K.A.R. 28-16-28f, maximum contaminant levels for toxic, carcinogenic, teratogenic, or mutagenic substances specified in 40 C.F.R. 141.11, 141.13, and 141.61 through 141.66, dated July 1, 2012, shall be deemed nonharmful.

(D) The introduction of plant nutrients into surface waters designated for domestic water supply use shall be controlled to prevent interference with the production of drinking water.

(4) Food procurement use.



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(A) Criteria listed in table 1a of the "Kansas surface water quality standards: tables of numeric criteria" for food procurement use shall not be exceeded outside of a mixing zone due to any artificial source of pollution.

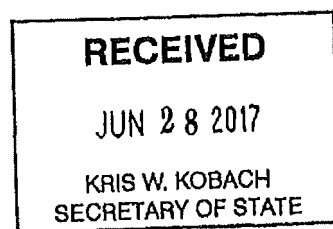
(B) Substances that can bioaccumulate in the tissues of edible aquatic or semiaquatic life or wildlife through bioconcentration or biomagnification shall be limited in surface waters to concentrations that result in no harm to human consumers of these tissues. For bioaccumulative carcinogens, surface water concentrations corresponding to a cancer risk level of less than 0.000001 (10^{-6}) in human consumers of aquatic or semiaquatic life or wildlife shall be deemed nonharmful by the department and adopted as food procurement criteria. Average rates of tissue consumption and lifetime exposure shall be assumed by the department in the estimation of the cancer risk level.

(5) Groundwater recharge use. In surface waters designated for the groundwater recharge use, water quality shall be such that, at a minimum, degradation of groundwater quality does not occur. Degradation shall include any statistically significant increase in the concentration of any chemical or radiological contaminant or infectious microorganism in groundwater resulting from surface water infiltration or injection.

(6) Industrial water supply use. Surface water quality criteria for industrial water supplies shall be determined by the secretary on a case-by-case basis to protect the public health, safety, or the environment.

(7) Recreational use.

(A) General. The introduction of plant nutrients into surface waters designated for



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primary or secondary contact recreational use shall be controlled to prevent the development of objectionable concentrations of algae or algal by-products or nuisance growths of submersed, floating, or emergent aquatic vegetation.

(B) Primary contact recreation for classified surface waters other than classified stream segments. A single sample maximum or a geometric mean of at least five samples collected during separate 24-hour periods within a 30-day period shall not exceed the criteria in table 1j of the "Kansas surface water quality standards: tables of numeric criteria" beyond the mixing zone.

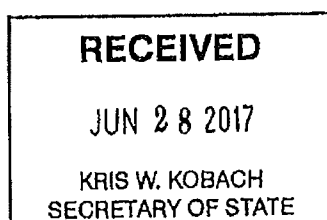
(C) Secondary contact recreational use for classified surface waters other than classified stream segments. A single sample maximum or a geometric mean of at least five samples collected during separate 24-hour periods within a 30-day period shall not exceed the criteria in table 1j of the "Kansas surface water quality standards: tables of numeric criteria" beyond the mixing zone.

(D) Primary contact recreation for classified stream segments. At least five samples shall be collected during separate 24-hour periods within a 30-day period. A geometric mean analysis of these samples shall not exceed the criteria in table 1i of the "Kansas surface water quality standards: tables of numeric criteria" beyond the mixing zone.

(E) Secondary contact recreation for classified stream segments. The following criteria shall be in effect from January 1 through December 31 of each year:

(i) At least five samples shall be collected during separate 24-hour periods within a 30-day period.

(ii) A geometric mean analysis of the samples specified in paragraph (d)(7)(E)(i) shall not



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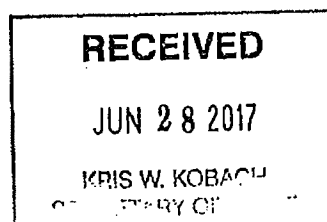
exceed the criteria in table 1i of the “Kansas surface water quality standards: tables of numeric criteria” beyond the mixing zone.

(F) Wastewater disinfection. Wastewater effluent shall be disinfected if the department determines that the discharge of nondisinfected wastewater constitutes an actual or potential threat to public health. Situations that constitute an actual or potential threat to public health shall include instances in which there is a reasonable potential for the discharge to exceed the applicable criteria supporting the assigned recreational use designation or if a water body is known or likely to be used for either of the following:

- (i) Primary or secondary contact recreation; or
- (ii) any domestic water supply.

(8) Multiple uses. If a classified stream segment or classified surface water other than a classified stream segment is designated for more than one designated use according to K.A.R. 28-16-28d, the water quality of the classified stream segment or classified surface water other than a classified stream segment shall meet the most stringent of the applicable water quality criteria.

(e) Tables. The numeric criteria for the designated uses of classified surface waters shall be the numeric criteria specified in the department’s “Kansas surface water quality standards: tables of numeric criteria,” dated ~~January 21, 2015~~ March 2, 2017, which is hereby adopted by reference. (Authorized by K.S.A. ~~2014~~ 2016 Supp. 65-171d, K.S.A. 65-171m, and K.S.A. ~~2014~~ 2016 Supp. 82a-2010; implementing K.S.A. ~~2014~~ 2016 Supp. 65-171d, K.S.A. 65-171m, and K.S.A. ~~2014~~ 2016 Supp. 82a-2002, 82a-2003, 82a-2004, and 82a-2010; effective May 1, 1986;



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amended, T-87-8, May 1, 1986; amended May 1, 1987; amended Aug. 29, 1994; amended July 30, 1999; amended Nov. 3, 2000; amended Aug. 31, 2001; amended Jan. 3, 2003; amended Oct. 24, 2003; amended Jan. 28, 2005; amended March 20, 2015; amended

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28-16-28f. Administration of surface water quality standards. (a) Application of modified surface water quality standards. A modification to the surface water quality standards, the surface water register, or both, shall have no effect on the requirements of any existing enforceable discharge permit issued under K.S.A. 65-165, and amendments thereto, unless the discharge fails to meet the requirements of the permit or the secretary determines that continuation of the discharge will result in a potential or actual public health hazard or in irreversible water use impairments.

(b) Water quality certification. No action identified in this subsection shall be taken unless the department has issued a water quality certification for the following:

(1) Any action requiring a federal license or permit pursuant to the federal clean water act;

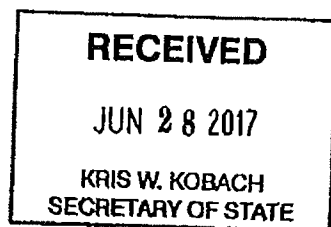
(2) any action subject to the permitting provisions of K.S.A. 65-165, and amendments thereto;

(3) any water development project subject to the provisions of K.S.A. 82a-325 et seq., and amendments thereto; and

(4) any action undertaken by any Kansas state agency that has a potential water quality impact.

(c) Compliance schedules.

(1) Except as provided in paragraph (c)(2), compliance schedules contained in any discharge permit or license issued by the department pursuant to the federal clean water act or K.S.A. 65-165, and amendments thereto, shall not extend more than three years beyond the date of permit issuance.



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(2) Compliance schedules of up to five years in total duration may be granted if it is demonstrated that the strict application of paragraph (c)(1) is not feasible due to construction scheduling constraints or other technical limitations.

(d) Variances. ~~If, upon written application by any person, the secretary finds that by reason of substantial and widespread socioeconomic impact the strict enforcement of the water quality criteria of K.A.R. 28-16-28e(d) is not feasible, a variance from those criteria may be permitted and adopted into the regulations at the next systematic review or subsequent triennial review after public notification and opportunity for public comment.~~

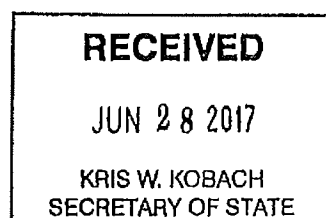
~~(1) Each person requesting a variance shall demonstrate compliance with 40 C.F.R. 131.10(g), which is adopted by reference in K.A.R. 28-16-28b.~~

~~(2) In granting a variance, conditions and time limitations may be set by the secretary with the intent that progress be made toward improvements in surface water quality.~~

~~(3) No action that impacts water quality shall be granted a variance from the requirements of K.A.R. 28-16-28e(b).~~

(1) If, upon written request by any person as defined in K.S.A. 65-170a and amendments thereto, the secretary finds by reason of any of the factors listed in paragraph (d)(5) of this regulation that the attainment of the designated use and any criterion of K.A.R. 28-16-28e is not feasible, a variance establishing an interim designated use and interim criterion may be permitted and adopted into the regulations at the next systematic review or subsequent triennial review and after a public hearing consistent with 40 C.F.R. 131.20(b), dated August 21, 2015.

(2) Each variance shall be issued and evaluated using methods outlined in the "Kansas



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implementation procedures: surface water quality standards," as adopted in K.A.R. 28-16-28b.

(3) Adoption and implementation of each variance shall be in accordance with 40 C.F.R. 131.14, dated July 1, 2016 and hereby adopted by reference, except that 131.14(a)(2), 131.14(a)(4), 131.14(b)(1)(ii), and 131.14(b)(2)(i)(A) shall be replaced by paragraphs (d)(4) through (d)(7) of this regulation, respectively.

(4) Each variance shall have a designated term limit and reflect the highest attainable condition during the specified term. A variance may be applied to individual or multiple dischargers or surface water bodies.

(5) The following factors may preclude attainment of the designated use and criterion, necessitating the adoption of a variance from the designated use or associated criterion:

(A) Naturally occurring pollutant concentrations;

(B) natural, ephemeral, intermittent, or low-flow conditions or water levels, unless augmented by effluent or other discharges;

(C) human-caused conditions or sources of pollution that cannot be remedied or could cause more environmental damage to correct than to leave in place;

(D) dams, diversion, or other types of hydrologic modifications that cannot be modified or operated to attain the use;

(E) physical conditions that affect aquatic life use of the natural water features of the surface water segment, including lack of a proper substrate, inadequate cover, flow, depth, pools, and riffles;

(F) controls more stringent than those required by sections 301(b) and 306 of the federal



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clean water act that could result in substantial and widespread economic and social impact; and

(G) necessary actions undertaken to facilitate lake, wetland, or stream restoration through dam removal or other significant reconfiguration activities.

(6) Each variance shall have requirements and a time limitation demonstrating the intent that progress be made toward the attainment of the underlying designated use and criterion.

(A) Each Kansas surface water quality standard not specifically addressed in a variance shall remain applicable.

(B) Each person requesting a variance shall provide evidence that a designated use and criterion, or a designated use or criterion, addressed by the variance cannot be achieved solely by the implementation of technology-based effluent limits.

(C) Each requirement shall represent the highest attainable condition of the surface water segment applicable throughout the term of the variance. A specified requirement shall not result in lowering the currently attained ambient water quality, unless a variance is necessary for physical reconfiguration activities intended for surface water segment restoration. The highest attainable condition of each affected surface water segment as a quantifiable expression shall be specified as one of the following:

(i) The highest attainable interim criterion;

(ii) the interim effluent condition that reflects the greatest pollutant reduction achievable;

or

(iii) the interim criterion or effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the variance is adopted.

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(D) If the quantifiable expression identified in paragraph (d)(6)(C)(iii) is selected, a pollutant minimization plan consistent with 40 C.F.R. 131.3(p) shall be required if no additional feasible pollutant control technology is identified.

(7) Each variance request shall include supporting documentation that demonstrates all of the following:

(A) Attaining the designated use and criterion is not feasible throughout the term of the variance because of one of the factors cited in paragraph (d)(5).

(B) The term of the variance is only as long as necessary to achieve the highest attainable condition.

(C) The highest attainable condition of the affected surface water segment is as defined in paragraph (d)(6)(C).

(8) A discharger that impacts water quality shall not be granted a variance from requirements of K.A.R. 28-16-28c and 28-16-28e.

(9) Specific eligibility requirements may be included in a multiple-discharger variance as an alternative to identifying the specific dischargers at the time of adoption of the variance. Each discharger shall meet the eligibility requirements in the applicable section of the "Kansas surface water quality standards variance register," as adopted by reference in K.A.R. 28-16-28h, to participate in a multiple-discharger variance.

(e) Site-specific criteria. Site-specific criteria shall be established using the methods outlined in the "Kansas implementation procedures: surface water quality standards," as adopted by reference in K.A.R. 28-16-28b.

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(f) Enforcement. Each person deemed by the department to be responsible for a violation of the Kansas surface water quality standards caused by an artificial source of pollution shall be required by the department to initiate corrective actions that restore the designated uses of the affected surface water or surface water segment impaired by the violation and provide for the return of the original surface water quality conditions. (Authorized by K.S.A. ~~2014~~ 2016 Supp. 65-171d and K.S.A. 65-171m; implementing K.S.A. 65-164, K.S.A. ~~2014~~ 2016 Supp. 65-171d, and K.S.A. 65-171m; effective May 1, 1986; amended Aug. 29, 1994; amended July 30, 1999; amended Jan. 28, 2005; amended March 20, 2015; amended P-_____.)

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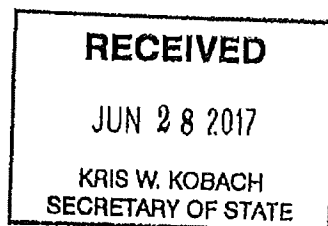
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28-16-28h. Surface water variance register. The variances approved by the secretary shall be those identified in the department's "Kansas surface water quality standards variance register," dated April 27, 2017, which is hereby adopted by reference. (Authorized by K.S.A. 2016 Supp. 65-171d; implementing K.S.A. 2016 Supp. 65-171d and K.S.A. 65-171m; effective

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KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT
DIVISION OF ENVIRONMENT

REGULATORY IMPACT STATEMENT

PURSUANT TO K.S.A. 2016 SUPP. 77-416

Proposed Amendments to Regulations
K.A.R. 28-16-28b, 28-16-28d, 28-16-28e,
28-16-28f

Proposed New Regulations 28-16-28h

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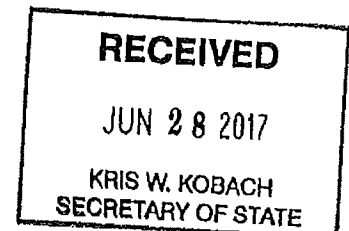
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Regulatory Impact Statement

K.A.R. 28-16-28b, K.A.R.28-16-28d, K.A.R. 28-16-28e, K.A.R. 28-16-28f and 28-16-28h

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I. Executive Summary of Proposed Amendments

A. Introduction

K.A.R. 28-16-28b through 28-16-28h comprise what is referred to as the Kansas Surface Water Quality Standards (KSWQS). In accordance with section 303 of the Clean Water Act (CWA), states must review and revise their surface water quality standards (WQS) once every three years, which is referred to as the triennial review. According to the CWA, the public must be involved in the triennial review process. The CWA does not state how this is to be done, but it was the intent of Kansas Department of Health and Environment (KDHE) to get the most public involvement as possible.

In 2014, Kansas entered into a pilot project with the Environmental Protection Agency (EPA) for the development of a multiple-discharger variance (MDV) project to address the problems lagoons throughout Kansas would have when implementing the new ammonia criteria limits released by EPA in 2013. On August 21, 2015, EPA released the Water Quality Standards Regulatory Revisions; Final Rule, which included new regulations for water quality criteria variances. Due to the release of the Final Rule, KDHE identified the need to revise the variance regulation K.A.R. 28-16-28f(d) and all other associated regulations affected by the revisions to K.A.R. 28-16-28f(d). A new regulation, K.A.R. 28-16-28h, is being proposed to document adopted and approved variances and as a venue to make variances available for public review. KDHE and EPA representatives conducted monthly conference calls that gradually changed to bimonthly calls to work through the details of the MDV and the regulation package.

Another proposed regulatory update being presented is the revision of the acute and chronic aquatic life criteria for ammonia as presented in the "Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater 2013" guidance, released by EPA in 2013 as a national recommended criteria.

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B. Summary of Proposed Amendments

There are many style and editorial changes to the regulations. The major amendments proposed are the:

- revision of K.A.R. 28-16-28b Definitions;
- revision of K.A.R. 28-16-28d(c), 28-16-28d(d)(1) and 28-16-28d(d)(3);
- revision of K.A.R. 28-16-28e(c)(1), 28-16-28e(c)(2), 28-16-28e(d)(2)(D)(ii), and 28-16-28e(e)
- revision of K.A.R. 28-16-28f(d) Variances;
- creation of a new regulation K.A.R. 28-16-28h, Kansas surface WQS variance register;
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- adoption of the 2013 chronic and acute aquatic life ammonia criteria in the Kansas Surface Water Quality: Standards Tables of Numeric Criteria.

II. Economic Impact Statement

1. Are the proposed regulations or amendments mandated by federal law as a requirement for participating in or implementing a federally subsidized or assisted program?

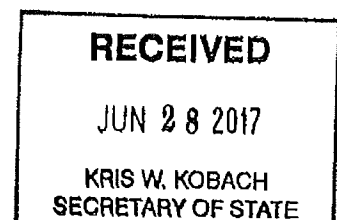
Yes. Section 303 of the Clean Water Act (CWA) requires States that have assumed authority and responsibility for water quality programs from the Environmental Protection Agency (EPA) to conduct a review of existing WQS from time to time, but at least once every three years. States are to amend their WQS following the triennial review in response to public participation, new available science, and/or newly adopted federal requirements. Following the adoption of the revised WQS, they must be submitted to the EPA for approval.

2. Do the proposed regulations or amendments exceed the requirements of applicable federal law?

No. The proposed WQS are set by federal regulations and EPA guidelines authorized by the CWA.

3. Description of costs to agencies, to the general public and to persons who are affected by, or are subject to, the regulations:

The core requirements of the WQS have not been changed substantially. Adoption of the 2013 ammonia criteria may have a potential cost associated with implementation. The majority of mechanical wastewater facilities can meet the proposed 2013 ammonia criteria with current technology. A large number of (~327) municipal wastewater lagoons may not be able to meet the 2013 ammonia criteria, which is 52-56% lower than the current criteria. When implemented, the water quality standards variance regulations will aid NPDES facilities in attaining the highest attainable condition at a minimal or no cost to the facility. Without the variance, municipalities with lagoon wastewater systems would be subject to incurring significant costs to implement technology to meet the 2013 ammonia criteria.



K.A.R. 28-16-28b, K.A.R. 28-16-28d, K.A.R. 28-16-28e, K.A.R. 28-16-28f and 28-16-28h

The cost of implementation would mostly be incurred by KDHE for the regulations pertaining to water quality standards variances and other revised regulations.

a. **Capital and annual costs of compliance with the proposed regulations or amendments and the persons who will bear those costs.**

Amendments to K.A.R. 28-16-28b Definitions: No additional capital cost is expected for the regulated communities. The cost of implementation will be borne by KDHE.

Amendments to K.A.R. 28-16-28d(c), 28-16-28d(d)(1) and 28-16-28d(d)(3): No additional capital cost is expected for the regulated communities. The cost of implementation will be borne by KDHE.

Amendments to K.A.R. 28-16-28e(c)(1), 28-16-28e(c)(2), 28-16-28e(d)(2)(D)(ii), and 28-16-28e(e): No additional capital cost is expected for the regulated communities. The cost of implementation will be borne by KDHE.

K.A.R. 28-16-28f(d) Variances: No additional capital cost is expected for the regulated communities. The cost of implementation will be borne by KDHE. This regulation could aid NPDES facilities that cannot afford facility modifications required to meet criteria limits set forth in the water quality standard regulations.

New regulation K.A.R. 28-16-28h, Kansas surface water quality standards variance register: No additional capital cost is expected for the regulated communities. The cost of implementation will be borne by KDHE.

Amendments to the Kansas Implementation Procedures - Surface Water Quality Standards: Section 4, Surface Water Quality Standards Variances, was added to the *Kansas Implementation Procedures - Surface Water Quality Standards* to address the implementation of K.A.R. 28-16-28f(d). The cost of implementation will be borne by KDHE.

New Kansas Surface Water Quality Standards Variance Register: The "Kansas Surface Water Quality Standards Variance Register" is the mechanism to document surface water quality standard variances that have been adopted by the State and made available to the public. The cost of implementation will be borne by KDHE.

Amendments to the Kansas Surface Water Quality: Numeric Criteria Tables 1a, 1c, 1d and 1e - Adopting the 2013 chronic and acute aquatic life ammonia criteria: Numeric Table 1a was revised to reference the appropriate numeric tables for proposed ammonia criteria. Numeric Table 1c has been revised to meet new total ammonia acute criteria and Table 1d has been revised to meet the new total ammonia chronic criteria.

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Numeric Table 1e has been deleted. The regulated community may incur additional costs with the implementation of the new criteria limits. Recommended revisions to Table 1a, 1c and 1d can be found in Appendix A.

b. Initial and annual costs of implementing and enforcing the proposed regulations or amendments, including the estimated amount of paperwork, and the state agencies, other governmental agencies or other persons or entities who will bear the costs.

KDHE will bear sole responsibility for implementing and enforcing the proposed regulations. The anticipated fiscal impact for SFY 14 through SFY 17 by the amended KSWQS will be negligible since the additional workload will be absorbed by existing KDHE Bureau of Water staff.

c. Costs which would likely accrue if the proposed regulations or amendments were not adopted; the persons who will bear the costs and those who will be affected by the failure to adopt the regulations.

For the proposed surface water quality standards variance regulatory amendments, adopting the proposed regulations allows the regulated community the ability to request and the state the ability to adopt a variance for a designated use or criteria or waterbody with the intent of improving water quality. A WQS variance is a flexible mechanism of water quality protection that may be requested by an individual or group of dischargers who believe they cannot meet their current permit limit and are also uncertain whether the permit limit can ultimately be achieved. WQS variances are a time-limited designated use and/or criteria that reflects the highest attainable condition (HAC) as an alternative to one or more of the criteria of K.A.R. 28-16-28e while maintaining all other applicable WQS standards. When a WQS variance is adopted the HAC will be the National Pollutant Discharge Elimination System (NPDES) permit limits where a designated use(s) and/or criteria cannot currently be met due to one of the factors cited in the proposed K.A.R. 28-16-28f(d)(5). A WQS variance may also be appropriate when a facility has opportunities to improve water quality, but the timeframe is uncertain as to when the criteria will be consistently met.

For the ammonia and other numeric criteria, adopting the National Recommended Criteria (304(a)) is always recommended by EPA since the 304(a) criteria reflect the latest available data and scientific knowledge. EPA also recommends the 304(a) criteria be adopted within two Triennial Review cycles after the publication dates of the criteria. With consideration of potential costs to the regulated communities, at this time KDHE has proposed to adopt the 2013 ammonia criteria of the National Recommended Criteria.

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If a state is taking too long to adopt the 304(a) criteria, EPA may promulgate the criteria on behalf of the state. For example, EPA promulgated the National Toxics Rules which applies to Kansas and a few other states. If EPA promulgates the 2013 ammonia criteria without the ammonia variance language, lagoon wastewater treatment plants would incur a significant financial burden to meet the promulgated criteria limits by having to upgrade their treatment facilities.

If the WQS variance regulations are not adopted significant costs could be placed upon the regulated community because they would not have the flexibility to request a WQS variance if needed. For example, if the ammonia criteria is approved without the accompanying variance provisions the financial burden of implementation would significantly impact municipalities with wastewater lagoons that cannot meet the new proposed ammonia criteria. The state will be able to implement the proposed ammonia criteria with minimal financial impact on the regulated community with the concurrent adoption of the proposed WQS variance regulations and the "Multiple-discharger Wastewater Lagoon Ammonia Variance" as written in the "Kansas Surface Water Quality Standards Variance Register." There may be costs incurred by larger waste water treatment lagoon systems that do not meet the proposed ammonia criteria and are not eligible to receive a variance.

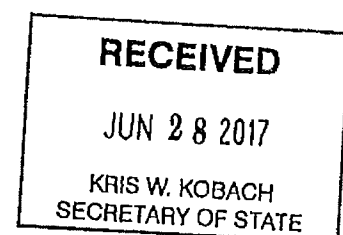
d. A detailed statement of the data and methodology used in estimating the costs used in the statement.

The data used to estimate cost was based on current employee salaries, laboratory costs, and contractual obligations. The method used to determine cost was a simple estimation based on past experiences and costs incurred.

e. Description of any less costly or less intrusive methods that were considered by the agency and why such methods were rejected in favor of the proposed regulations.

KDHE is aware of the current economic conditions and has only proposed changes that are considered the most important and cost effective. Overall, the costs to implement the changes are considered minimal. KDHE bears the majority of the potential costs for implementation.

f. Consultation with League of Kansas Municipalities, Kansas Association of Counties, and Kansas Association of School Boards.



Copies of the proposed regulations, regulatory impact statement and notice of hearing were mailed electronically to these groups at the beginning of the public comment period.

III. Environmental Benefits Statement

1. Need for proposed amendments and environmental benefit likely to accrue.

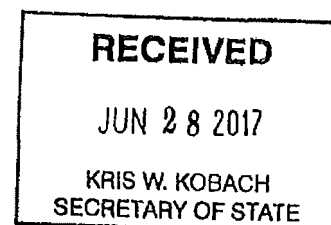
a. Need

These regulations are being proposed as a partial submission of the triennial review process to be in compliance with section 303 of the CWA. The need for this partial submission is to provide the regulated community with the most current mechanism to obtain a water quality standards variance if they are unable to immediately meet the current water quality criteria and use due to one of the reasons listed in the proposed K.A.R. 28-16-28f(d)(5). Adopting the proposed regulations in K.A.R. 28-16-28f(d) concurrently with the 2013 ammonia criteria and the "Multiple-discharger Wastewater Lagoon Ammonia Variance" is needed to minimize the impact on the regulated community while improving the quality of the waters of the State.

b. Environmental benefit

A variance is a mechanism that provides time for individual or a group of regulated facilities to implement adaptive management approaches that will improve water quality where the designated use and criteria currently in place are not being met, but still retain the designated use as a long term goal. When a time-limited water quality standards variance is adopted it allows for the flexibility to temporarily modify the water quality standards to the highest attainable use and criteria when one of the criteria listed in the proposed K.A.R. 28-16-28f(d)(5) . These varied use and criteria then serve as the basis for the permit limits that a discharger can meet for the duration of the variance. Since variances are criteria and use specific, all other applicable criteria for other pollutants will be retained to meet the goals of the water body or waterbody segments.

In accordance with section 304 of the CWA, EPA must from time to time develop, revise, and publish water quality criteria that accurately reflect the latest scientific knowledge. In 2013, EPA published a new aquatic life criteria for ammonia. KDHE is recommending the adoption of the new aquatic life criteria for ammonia and is committed to protecting the environment and public health. Concurrent adoption of the "Multiple-discharger Wastewater Lagoon Ammonia Variance" and 2013 ammonia criteria maximizes the environmental benefits with consideration to costs.



2. When applicable, a summary of the research or data indicating the level of risk to the public health or the environment being removed or controlled by the proposed regulations or amendments.

The U.S. EPA in accordance with section 304(a) of the CWA published the first national recommended water quality criteria with the "Blue Book" in 1973. Since that time, the EPA has made periodic updates to the national criteria through the "Red Book" in 1976, "Gold Book" in 1986, the 1998 Update, the 2002 update, and the latest update in 2009. The recommendation to adopt the latest aquatic life ammonia criteria is premised on the science presented in the "2013 Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater." In addition, KDHE conducted an analysis on data submitted by NPDES permittees authorized to discharge ammonia and found that the majority of mechanical facilities could meet the 2013 ammonia criteria.

3. If specific contaminants are to be controlled by the proposed regulation or amendment, a description indicating the level at which the contaminants are considered harmful according to current available research.

Appendix A is a table of KDHE's proposed changes to the numeric criteria 1c, 1d and 1e based on EPA's 2013 Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater criteria.

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