

OKLAHOMA WATER RESOURCES BOARD

RULE IMPACT STATEMENT

for Rule Amendments in OAC 785:45
Proposed or Considered for Adoption during 2021

A. A BRIEF DESCRIPTION OF THE PURPOSE OF THE PROPOSED RULES.

Oklahoma Water Resources Board (OWRB) staff is proposing to amend provisions of the Oklahoma Water Quality Standards codified in Oklahoma Administrative Code (OAC) 785:45 as presented below.

Technical documentation supporting the proposed amendments/rules outlined below is posted on the OWRB website <http://www.owrb.ok.gov/rules/wqs/revisions/totalphosphorous.php>. The OWRB hosted informal public stakeholder webinars on September 8, 2020, September 22, 2020, and October 6, 2020 to discuss the proposed amendments. During and since these meetings, OWRB staff received comments from other agencies or interested parties regarding the proposed rules and subjects B through J below. Staff worked to be responsive to the comments/information received in the draft proposed rules and in the absence of specific information from outside entities evaluated subjects B through J in a broad manner.

Proposed Total Phosphorus Criterion for scenic rivers in the Illinois River Watershed

Amendments are proposed to revise the total phosphorous criterion for protection of the aesthetics beneficial use in scenic rivers of the Illinois River watershed. This criterion was adopted in 2001 to limit the amount of TP contributing to the excessive growth of algae.

Phosphorus is present within waterbodies, in various organic and inorganic forms as well as dissolved and particulate forms. Phosphorus can come from natural sources through physical, chemical, and biological processes; but they also come from anthropogenic sources including agriculture activities, wastewater discharges, and stormwater runoff. These normal biological and chemical processes can become over stimulated by excess amounts of nutrients leading to an overabundance of plant and algal growth. Phosphorus pollution is among the most serious and widespread water quality challenges throughout the country, including Oklahoma.

The Second Statement of Joint Principles and Actions between Arkansas and Oklahoma Environmental Agencies was signed in February 2013. Under this agreement the states completed the Joint Phosphorus Criteria Study (Joint Study) managed by the Joint Study Committee. The Joint Study was conducted from 2014 through 2016 and culminated in a Final Report submitted to both state governors on December 19, 2016. The Joint Study Committee made a recommendation regarding Oklahoma's total

phosphorus water quality criterion. OWRB is conducting this criterion revision as an outgrowth of recommendations from the Arkansas-Oklahoma Joint Study Committee.

The proposed criterion, a six month rolling average of 0.037 mg/L which shall not be exceeded more than once in a one-year period and not more than three times in a five-year period, modifies only the criterion duration and frequency based on new and reexamined scientific information and is applicable only to the scenic river reaches of the Illinois River, Barren Fork Creek and Flint Creek (785:45-5-19(c)). The proposed change to 785:45-5-25 strikes the current total phosphorus criterion language because it is no longer relevant and does not need to be located in this section of 785:45.

B. A DESCRIPTION OF THE CLASSES OF PERSONS WHO MOST LIKELY WILL BE AFFECTED BY THE PROPOSED RULES, INCLUDING CLASSES THAT WILL BEAR THE COSTS OF THE PROPOSED RULES, AND ANY INFORMATION ON COST IMPACTS RECEIVED BY THE AGENCY FROM ANY PRIVATE OR PUBLIC ENTITIES.

Proposed Total Phosphorus Criterion for scenic rivers in the Illinois River Watershed

The classes of persons most likely to be affected by the proposed rules include Oklahoma Pollutant Discharge Elimination System (OPDES) permittees. Currently, there are several OPDES permits in the watershed. Two of these dischargers are the wastewater treatment plants of the City of Westville and the City of Tahlequah. It is likely that as part of their next permit renewal cycle these facilities will need to address the phosphorous in their effluent and will most likely need to upgraded treatment in order to reduce TP pollution. It is important to note that the magnitude of the proposed criterion (0.037 mg/L) is not changing, this criterion magnitude was originally adopted by the OWRB in 2001 and subsequently approved by EPA Region 6. The criterion averaging period is increasing from a 30-day geometric mean to a 6-month rolling average, which provides some regulatory flexibility while still protecting the beneficial use.

Additionally, landowners with agriculture or other various operations that discharge nonpoint sources (NPS) of phosphorus pollution may be affected by the proposed rule. In Oklahoma, the NPS program is implemented by the Oklahoma Conservation Commission (OCC) and this agency oversees a number of program activities that have the goal of reducing phosphorus pollution from the landscape. However, these programs are non-regulatory, and landowners are not required to participate.

Many of the OCC programs and projects involve educating landowners about the effectiveness of management practices (MPs) and assisting them through cost-share programs to voluntarily install appropriate MPs on their property. If landowners voluntarily decide to participate in one of these programs, they may incur cost associated with management practice implementation and or maintenance.

The proposed amendments have cost implications. The anticipated cost implications are generally associated with the additional treatment of wastewater that may be needed to meet the updated criterion. In general, any costs associated with compliance for the updated criterion for phosphorous will be determined by the size and current condition of a treatment facility, the extent of current controls, and the nature of the wastewater and receiving waters. The variability of factors associated with any facility or process changes required to comply with the proposed rules precludes the calculation of specific costs associated with attaining the proposed phosphorous criterion. The Oklahoma Department of Environmental Quality has a variety of implementation tools available to assist the dischargers in meeting their TP limits.

OWRB did not receive any cost information from any private or public entity.

C. A DESCRIPTION OF THE CLASSES OF PERSONS WHO WILL BENEFIT FROM THE PROPOSED RULES.

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Everyone in Oklahoma who lives in or recreates in the Illinois River Watershed will benefit from improved water quality resulting from the adoption of the proposed rules. There are millions of visitors to the Illinois River Watershed annually who enjoy activities like swimming, floating, fishing, and scenic vistas. These visitors contribute substantially to the local economic activity; for example, in 2019 visitor spending within 30 miles of Lake Tenkiller was just under \$70 million dollars. In addition to direct measures of economic activity, the experiences people enjoy on the Illinois River are equally valuable.

Protecting the aesthetics beneficial use in these rivers will promote recreation which benefits floating outfitters in the area as well as providing indirect revenue to local businesses such as restaurants, grocery stores, gas stations and lodging.

D. A DESCRIPTION OF THE PROBABLE ECONOMIC IMPACT OF THE PROPOSED RULES UPON AFFECTED CLASSES OF PERSONS OR POLITICAL SUBDIVISIONS, INCLUDING A LISTING OF ALL FEE CHANGES AND, WHENEVER POSSIBLE, A SEPARATE JUSTIFICATION FOR EACH FEE CHANGE.

Proposed Total Phosphorus Criterion for scenic rivers in the Illinois River Watershed

The proposed amendments have cost implications. The anticipated cost implications are generally associated with the additional treatment of wastewater that may be needed to meet the updated criterion. In general, any costs associated with compliance for the updated criterion for phosphorous will be determined by the size and current condition of a treatment facility, the extent of current controls, and the nature of the wastewater and receiving waters. The variability of factors associated with any facility or process changes required to comply with the proposed rules precludes the

calculation of specific costs associated with attaining the proposed phosphorous criterion. The Oklahoma Department of Environmental Quality has a variety of implementation tools available to assist the dischargers in meeting their TP limits. Additionally, landowners with agriculture or other various operations that discharge nonpoint sources (NPS) of phosphorus pollution may be affected by the proposed rule. In Oklahoma, the NPS program is implemented by the Oklahoma Conservation Commission (OCC) and this agency oversees a number of program activities that have the goal of reducing phosphorus pollution from the landscape. However, these programs are non-regulatory, and landowners are not required to participate.

Many of the OCC programs and projects involve educating landowners about the effectiveness of management practices (MPs) and assisting them through cost-share programs to voluntarily install appropriate MPs on their property. If landowners voluntarily decide to participate in one of these programs, they may incur cost associated with management practice implementation and or maintenance.

OWRB staff did not receive any information from affected persons, political subdivisions, or other state agencies regarding the probable economic impact of the proposed rules.

There are no fee changes included in the proposed rules.

E. THE PROBABLE COSTS AND BENEFITS TO THE AGENCY AND TO ANY OTHER AGENCY OF THE IMPLEMENTATION AND ENFORCEMENT OF THE PROPOSED RULES, THE SOURCE OF REVENUE TO BE USED FOR IMPLEMENTATION AND ENFORCEMENT OF THE PROPOSED RULES, AND ANY ANTICIPATED EFFECT ON STATE REVENUES, INCLUDING A PROJECTED NET LOSS OR GAIN IN STATE REVENUES IF IT CAN BE PROJECTED BY THE AGENCY.

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The proposed amendment only modifies the duration and frequency components of a TP criterion that has been in place since 2001. As such, there is no new anticipated costs expected to OWRB or other state agencies.

Oklahoma's state environmental agencies, including OWRB, currently implement and/or enforce water quality standards through existing programs under their respective jurisdictions. The proposed rules do not create any new implementation programs. The Oklahoma Conservation Commission engages in important work directly with landowners in the watershed to mitigate nonpoint sources of pollution like TP with WQS as a target for reductions. These programs are voluntary and primarily centered around educating landowners about best management practices they can implement on their property. Oklahoma Department of Environmental Quality is the agency responsible for discharge permitting and enforcement. It is not expected that ODEQ will be required to modify implementation and or enforcement activities.

State agencies that conduct water quality assessments to determine the attainment or nonattainment of beneficial uses will utilize the updated criterion to determine if a waterbody is impaired. If a waterbody is found to be impaired (not attaining its beneficial uses) it will be necessary for agency(s) to develop plans such as, a watershed-based plan or Total Maximum Daily Load to improve water quality. These plans and subsequent implementation actions are part of existing programs and do not create new responsibilities for any agency.

OWRB did not receive any information on probable costs and benefits to implement and enforce the proposed rules from any agency. The proposed rules are not expected to have any effect on state revenues.

F. A DETERMINATION OF WHETHER IMPLEMENTATION OF THE PROPOSED RULES WILL HAVE AN ECONOMIC IMPACT ON ANY POLITICAL SUBDIVISIONS OR REQUIRE THEIR COOPERATION IN IMPLEMENTING OR ENFORCING THE RULES.

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Political subdivisions are not expected to have implementation or enforcement responsibilities associated with the proposed rules. However, political subdivisions such as, municipalities that are required to obtain an OPDES permit for discharges may have compliance responsibilities and cooperation would be beneficial.

The anticipated cost implications are generally associated with the additional treatment of wastewater that may be needed to meet the updated criterion. In general, any costs associated with compliance for the updated criterion for total phosphorous will be determined by the size and current condition of a treatment facility, the extent of current controls, and the nature of the wastewater and receiving waters. The variability of factors associated with any facility or process changes required to comply with the proposed rules precludes the calculation of specific costs associated with attaining the proposed total phosphorous criterion.

G. A DETERMINATION OF WHETHER IMPLEMENTATION OF THE PROPOSED RULES MAY HAVE AN ADVERSE ECONOMIC EFFECT ON SMALL BUSINESS AS PROVIDED BY THE OKLAHOMA SMALL BUSINESS REGULATORY FLEXIBILITY ACT.

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The proposed updates do not change the framework of water quality standards protection and will not create any additional cost for small business (defined in 75 O.S. § 502). The proposed rule is not expected to have an adverse economic impact on any small business.

There are millions of visitors to the Illinois River Watershed annually who enjoy activities like swimming, floating, fishing, and scenic vistas. These visitors contribute substantially to the local economic activity; for example, in 2019 visitor spending within 30 miles of Lake Tenkiller was just under \$70 million dollars. Protecting the aesthetics beneficial use in these rivers will promote recreation which benefits floating outfitters in the area as well as providing indirect revenue to local businesses such as restaurants, grocery stores, gas stations and lodging.

H. AN EXPLANATION OF THE MEASURES THE AGENCY HAS TAKEN TO MINIMIZE COMPLIANCE COSTS AND A DETERMINATION OF WHETHER THERE ARE LESS COSTLY OR NONREGULATORY METHODS OR LESS INTRUSIVE METHODS FOR ACHIEVING THE PURPOSE OF THE PROPOSED RULES.

Proposed Total Phosphorus Criterion for scenic rivers in the Illinois River Watershed

The Oklahoma Water Resources Board (OWRB) is the state agency responsible for promulgating water quality standards to ensure water quality protection across the state. It is Oklahoma's desire to ensure protection of our aquatic resources. Recreation in and on Oklahoma's waters substantially contributes to the state's economy. This proposed rule will benefit Oklahoma residents and recreational visitors through protection of aquatic life resources and improved condition of scenic rivers.

OWRB staff did not receive any expected compliance cost information from other state agencies and/or interested parties.

I. A DETERMINATION OF THE EFFECT OF THE PROPOSED RULES ON THE PUBLIC HEALTH, SAFETY AND ENVIRONMENT AND, IF THE PROPOSED RULES ARE DESIGNED TO REDUCE SIGNIFICANT RISKS TO THE PUBLIC HEALTH, SAFETY AND ENVIRONMENT, AN EXPLANATION OF THE NATURE OF THE RISK AND TO WHAT EXTENT THE PROPOSED RULES WILL REDUCE THE RISK.

Proposed Total Phosphorus Criterion for scenic rivers in the Illinois River Watershed

The purpose of the proposed rule is to incorporate new scientific information regarding algal growth in response to total phosphorous concentrations in the Illinois River Watershed. The updated total phosphorous criterion will benefit Oklahoma residents and recreational visitors through protection of the aesthetic beneficial use and improved condition of surface waters in our scenic rivers.

Phosphorus is present within waterbodies and comes from natural sources through physical, chemical, and biological processes, as well as, anthropogenic sources including agriculture activities, wastewater discharges, and stormwater runoff. These normal biological and chemical processes can become over stimulated by excess

amounts of nutrients leading to an overabundance of plant and algal growth. Phosphorus pollution is among the most serious and widespread water quality challenges throughout the country, including Oklahoma.

Algal growth on the surface of rocks in the streambed is a significant fall hazard to those fishing, floating or swimming. Limiting the amount of phosphorous in these waterbodies will decrease excess algal growth and lower the fall risk for those recreating.

Excess nutrients like phosphorous can lead to noxious algal scums causing drinking water taste and odor issues, as well as harmful algal blooms (HABs). HABs may produce toxins that can sicken people and pets in contact with the water and contaminate drinking water sources. Exposure to HAB toxins in recreational waters can cause eye irritation, skin rashes, diarrhea, and cold or flu-like symptoms. People consuming water with HAB toxins are at risk for health effects including, vomiting and diarrhea, as well as liver and kidney damage. Conventional water treatment can generally remove low levels of toxins; however, treatment facility efficacy may be tested during a severe bloom event when the toxin concentrations are high. There are several municipalities in the Illinois River Watershed using these waterbodies as drinking water sources. Limiting phosphorous will decrease the risk to human health and protect against threats to the public water supply and recreation beneficial uses.

Recreation in and on Oklahoma's waters substantially contributes to the state's economy. This proposed rule will benefit Oklahoma residents and recreational visitors through improved condition of surface waters in scenic rivers.

J. A DETERMINATION OF ANY DETRIMENTAL EFFECT ON THE PUBLIC HEALTH, SAFETY AND ENVIRONMENT IF THE PROPOSED RULES ARE NOT IMPLEMENTED.

Proposed Total Phosphorus Criterion for scenic rivers in the Illinois River Watershed

Phosphorus is present within waterbodies and comes from natural sources through physical, chemical, and biological processes, as well as, anthropogenic sources including agriculture activities, wastewater discharges, and stormwater runoff. These normal biological and chemical processes can become over stimulated by excess amounts of nutrients leading to an overabundance of plant and algal growth. Phosphorus pollution is among the most serious and widespread water quality challenges throughout the country, including Oklahoma.

If the proposed rules are not implemented, there will be a detrimental effect to public health, safety, and the environment. Excess algal growth on the surface of rocks in the streambed will pose a significant fall hazard to those fishing, floating or swimming. Noxious algal scums may cause drinking water taste and odor issues, as well as harmful algal blooms (HABs). HABs may produce toxins that can sicken people and pets in contact with the water and contaminate drinking water sources. Exposure to

HAB toxins in recreational waters can cause eye irritation, skin rashes, diarrhea, and cold or flu-like symptoms. People consuming water with HAB toxins are at risk for health effects including, vomiting and diarrhea, as well as liver and kidney damage.

K. THE DATE THE RULE IMPACT STATEMENT WAS PREPARED AND IF MODIFIED, THE DATE MODIFIED:

This rule impact statement was prepared and approved on December 1, 2020, Monty Porter, Assistant Chief of Water Quality Programs Division, Oklahoma Water Resources Board.