

OKLAHOMA WATER RESOURCES BOARD

**RULE IMPACT STATEMENT**

for Rule Amendments in OAC 785:45  
Proposed or Under Consideration for Adoption During 2012

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

The staff of the Oklahoma Water Resources Board ("OWRB") is proposing to amend, or is considering amending, various provisions of the Oklahoma Water Quality Standards ("OWQS") codified in Oklahoma Administrative Code ("OAC") 785:45 as follows:

OAC 785:45-5-12, Fish and wildlife propagation, is proposed to be amended in (f)(1) by clarifying that the appropriate seasonal temperatures prescribed in Table 1 of Appendix G of OAC 785:45 are appropriate for calculating biochemical oxygen demand (BOD) load. The circumstance which created the need for this amendment is that the Oklahoma Department of Environmental Quality (DEQ) has encountered problems implementing the existing language. The intended effect of this amendment is to eliminate the ambiguity that causes problems in the permitting process.

OAC 785:45-5-13, Agriculture, is proposed to be amended in (e) by restoring language regarding default low flow. The circumstance which created the need for this amendment is that revisions to the Oklahoma Water Quality Standards in 1997 removed the default low flow. The intended effect of this amendment is to restore the default low flow such that protection for the Agriculture beneficial use at low flow is consistent with implementation for toxic substances.

OAC 785:45-5-19, Aesthetics, is proposed to be amended by removing the numerical color criterion applicable for permitting purposes. The circumstance which created the need for this amendment is that the U.S. Environmental Protection Agency (EPA), pursuant to its authority to approve water quality standards under the federal Clean Water Act, did not approve previous amendments in 2010 that limited the applicability of the color criterion to discharge permits. The intended effect of this proposed amendment is to eliminate unjustifiable determinations of impaired waters based upon an outdated criterion.

OAC 785:45-5-20, Fish consumption, is proposed to be amended by restoring language that clarifies that the criteria for this beneficial use are applicable only to the subcategories of Warm Water Aquatic Community, Cool Water Aquatic Community, or Trout Fishery. The circumstance which created the need for this amendment is that the applicability language was inadvertently deleted in 2006. The intended effect of this amendment is to restore that deleted language and to eliminate the inconsistency for implementing human health criteria in OAC 785:46.

Appendix A, Designated Beneficial Uses for Surface Waters, is proposed to be revoked and reenacted with the addition of paragraphs (c), Limitations for Additional Protection, and (d), Remarks used in Appendices A.1 through A.7. The circumstance which created the need for this amendment is that these paragraphs were inadvertently omitted in a previous revision of this Appendix. The intended effect of these amendments is to provide state environmental agencies with clear consistent water quality standards.

Appendices A.1, A.2, A.3, A.4, A.5, A.6, and A.7, which cumulatively contain all of the waterbodies throughout the state which have had specific beneficial uses designated, are all proposed to be revoked and reenacted with several Waterbody Identification numbers and names added or changed. The circumstance which created the need for these amendments is that the DEQ has updated its Waterbody ID coverage. The intended effect of these amendments is to list all the proper Waterbody ID's for each segment.

Appendix A.3, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 3, Upper Red River Basin, is also proposed to be revoked and reenacted to make the Warm Water Aquatic Community beneficial use subcategory applicable to a segment of Rush Creek and to edit various waterbody names and identification numbers to be consistent with new GIS coverage. The circumstance which created the need for this action is that review of recent stream data indicate that the proposed revised beneficial use is now an existing use. The intended effect of these amendments is to satisfy Clean Water Act requirements to review and upgrade less than swimmable and fishable uses where new data indicate otherwise.

Appendix A.5, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 5, Canadian River, is also proposed to be revoked and reenacted to designate the Warm Water Aquatic Community beneficial use subcategory for a segment of Wewoka Creek and to designate the Primary Body Contact Recreation beneficial use for a segment of the Canadian River. The circumstance which created the need for this action is that review of recent stream data indicate that these proposed revised beneficial uses are now existing uses. The intended effect of these amendments is to satisfy Clean Water Act requirements to review and upgrade less than swimmable and fishable uses where new data indicate otherwise.

Appendix G, Numerical Criteria to Protect Beneficial Uses, is proposed to be revoked and reenacted with several revisions. First, the preamble introduction is proposed to be modified with deletion of a contradictory phrase that Table 2 numerical limits "cannot be exceeded". The circumstance that created this need is that many parameters must be implemented as averages. The intended effect is that text in the body will determine implementation of specific parameters rather than the preamble of the Appendix. Second, Table 1, Dissolved Oxygen Criteria to Protect Fish and Wildlife Propagation and All Subcategories Thereof, is proposed to be revised to restore a footnote lost due to a scrivener's error in 2002. The circumstance which created the need for this amendment is the need for clarity in implementing dissolved oxygen criteria. The intended effect of this amendment is to provide state environmental agencies with clear consistent water quality standards. Third, Table 2, Numerical Criteria to Protect Beneficial Uses and All Subcategories Thereof, is proposed to be revoked and reenacted with several changes. New and revised human health criteria for 25 toxic or carcinogenic chemicals will be added. New criteria for four new pollutants will be added and revised criteria for 21 existing priority pollutants have been recalculated based on EPA's 2000 revision to its methodology for calculating human health criteria (HHC) for carcinogens and noncarcinogens. All these are priority pollutants and affect human health above certain concentrations and the EPA has released new guidance on protective water quality criteria and new cancer potency information. The circumstance which created the need for these amendments is after a review of OWRB Water Quality Standards (WQS) revisions in 2010, EPA recommended updating additional human health water chemicals using EPA's 2000 Human Health Methodology and the new toxicological information (e.g. reference dose and cancer slope factors), as well as the new default fish consumption rate of 17.5 grams per day, in the absence of more local or regional fish consumption rate data. Also, the absence of WQS for some of these pollutants along with the publication of the new or revised guidance documents

assisting states in promulgating appropriately protective criteria caused the update. The intended effect of these amendments is to provide state environmental agencies appropriately protective criteria for these priority pollutants on which to base decisions pertinent to their individual areas of jurisdictional responsibility.

Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater, is proposed to be revoked and reenacted with several changes. The first change involves modifications requested by the DEQ to the already existing listing in Appendix H identifying special well construction for toxic metals in the Boone shallow groundwater at the Tar Creek Superfund site. The circumstance which created the need for this amendment is the need for testing groundwater of the Boone aquifer in this location prior to completing a well. The intended effect of these amendments is to restrict future uses of groundwater from the shallower portion of the Boone aquifer used for potable or domestic supply that is impacted with site-related contaminants. The second change is the addition of 36.26 acres of the North-Central Oklahoma aquifer at the former Farmland Feed Mill site in Enid, Oklahoma, with a remark limiting groundwater use. The circumstance which created the need for this amendment is that this site has a nitrate concentration that is greater than the allowable concentration under the drinking water standards and has been demonstrated to be technically infeasible to remediate further. The intended effect of these amendments is to limit the future uses of groundwater from the North-Central Oklahoma aquifer at this site. The third change requested by the DEQ is the addition of the site at the former Hudson Refinery Superfund site in Payne County, Oklahoma with the default class and beneficial uses and a remark prohibiting of groundwater use for any purpose. The circumstance which created the need for this amendment is that hydrocarbon contamination of the groundwater has been documented at the site. The intended effect of these amendments is to be consistent with deed notices that have been filed in county land records prohibiting the use of groundwater for any purpose. The fourth change requested by the DEQ is the addition of the former Blackwell Zinc Company site in Kay County, Oklahoma and a remark prohibiting groundwater well drilling at the site. The circumstance which created the need for this amendment is cadmium and zinc contamination due to historic smelter operations. The intended effect of these amendments is to be consistent with the City Ordinance No. 2801 passed by the City of Blackwell prohibiting installation of groundwater wells within the groundwater protection area. The fifth change proposed is to provide a Class I designation for the entirety of the Arbuckle-Simpson aquifer. The circumstances which created the need for this amendment is that Class I designations are currently applicable to only small portions of the aquifer, and the organization The Citizens for Protection of the Arbuckle Simpson Aquifer (CPASA), and the cities of Tishomingo and Ada have requested this revision. The intended effect of this amendment is to provide a more accurate and appropriate Class designation for this aquifer. The sixth change is addition of a 20 acre site in Dewey County and to provide remarks directing special well completion requirements. The circumstance which created the need for this amendment is that residue remaining at this site, identified by the Oklahoma Corporation Commission after remediation of a petroleum release that occurred prior to 1999, has been demonstrated to be technically infeasible to remediate further. The intended effect of this amendment is to prevent the spread of residual pollution into the Rush Springs aquifer. The last change is addition of a 40 acre site in Oklahoma County and to provide remarks directing special well completion requirements. The circumstance which created the need for this amendment is historic brine spills and pipeline leaks which have been identified by the Oklahoma Corporation Commission at this site. The intended effect of this amendment is to prevent the spread of old oilfield pollution into more of the Garber-Wellington aquifer.

**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.**

The OWRB held two informal public meetings to discuss the proposed amendments on September 14 and October 11, 2012 and has published technical justification summary documents at: [http://www.owrb.ok.gov/util/rules/wqs\\_revisions.php](http://www.owrb.ok.gov/util/rules/wqs_revisions.php). During and since those meetings, the OWRB staff has received some specific information responsive to these issues which are described below. In the absence of any other specific information from other state environmental agencies or other interested persons, the OWRB staff expects the proposals to have little to no effect on any regulated entity, state agency or the general public except as follows:

Amendments proposed to OAC 785:45-5-12(f)(1) clarify that the appropriate seasonal temperatures prescribed in Table 1 of Appendix G of OAC 785:45 are appropriate for calculating biochemical oxygen demand (BOD) load. The revision reinforces current procedures already in place and no permitted municipal or industrial dischargers are expected to be adversely affected.

Amendments proposed to OAC 785:45-5-13(e), Agriculture, restoring language regarding default low flow, will benefit a limited number of dischargers by allowing an assumed dilution flow of one cubic foot per second for calculating permit limits.

Amendments proposed to OAC 785:45-5-20, Fish consumption, restores language that clarifies that the criteria for this beneficial use are applicable only to the subcategories of Warm Water Aquatic Community, Cool Water Aquatic Community, or Trout Fishery. A limited number of municipal and industrial dischargers of toxic substances that discharge to Habitat Limited Aquatic Community (HLAC) streams identified in the WQS with only limited aquatic community may benefit.

Amendments proposed to Appendix A.3, Designated Beneficial Uses of Surface Waters, Water Quality Management Basin 3, Upper Red River Basin, make the Warm Water Aquatic Community beneficial use subcategory applicable to a segment of Rush Creek. No direct permitted discharges to this segment have been identified and no adverse impact to any class of person is expected.

Amendments proposed to Appendix A.5, Designated Beneficial Uses of Surface Waters, Water Quality Management Basin 5, Canadian River, designate the Warm Water Aquatic Community beneficial use subcategory for a segment of Wewoka Creek, and Primary Body Contact Recreation beneficial use for a segment of the Canadian River. This may have limited effect upon permitted discharges in the respective segments. Information from the DEQ indicates that permittees in the affected segments already have appropriate limits and technology in place to address the more stringent criteria associated with the proposal and no adverse impact to any class of person is expected.

Amendments proposed to Appendix G, Numerical Criteria to Protect Beneficial Uses, relax criteria for four priority pollutants based on new cancer potency information and the most recent and relevant scientific information. The ambient criteria for 15 priority pollutants have been reduced based on new EPA minimum assumed fish consumption rates, cancer potency information and the most recent and relevant scientific information to protect human health to

reduce their toxic or carcinogenic effects. Criteria for six additional chemicals are also proposed. According to the DEQ, priority pollutant scans required of dischargers have identified 44 industrial facilities and 16 municipalities with one or more of the 25 pollutants in their wastewater discharge. Potential increased costs for additional treatment, if required for those pollutants, are undetermined and will be dependent upon the nature of the discharge, background concentrations, dilution flows and the discharge permitting process.

Amendments proposed to Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater, modify or add several sites as requested by the DEQ and Corporation Commission that would limit future uses of groundwater at these sites and provide information necessary to protect public health. The Appendix H remarks for the added and revised sites will require special well construction to avoid cross-contamination of other aquifers and/or water treatment to allow safe use of the waters. Some additional costs may be incurred by entities utilizing groundwater at these sites.

Amendments proposed to Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater to provide a Class I designation for the entirety of the Arbuckle-Simpson aquifer, have been requested by The Citizens for the Protection of the Arbuckle-Simpson Aquifer (CPASA) and are expected to have little or no new effect on any regulated entity or state agency. However, the OWRB has received letters with comments from Oklahoma Aggregates Association, Oklahoma Independent Petroleum Association and Environmental Federation of Oklahoma with concern that there may be possible unintended consequences that this class of regulated entities associated within the Arbuckle Simpson aquifer area could bear the unpredicted costs of the proposed designation.

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

Classes of persons who are expected to benefit from the proposed rules are as follows:

Amendments proposed to OAC 785:45-5-12(f)(1) clarify that the appropriate seasonal temperatures prescribed in Table 1 of Appendix G of OAC 785:45 are appropriate for calculating biochemical oxygen demand (BOD) load. State agencies and regulated entities will benefit from the proposed rules with reduced confusion regarding information used to calculate permits.

Amendments proposed to OAC 785:45-5-13(e), Agriculture, restoring language regarding default low flow, will benefit a limited number of dischargers by allowing an assumed dilution flow of one cubic foot per second for calculating permit limits.

Amendments proposed to OAC 785:45-5-19, removing the numerical color criterion applicable for permitting purposes, will facilitate EPA approval of previous revisions of OAC 785:45 removing the numerical color criterion for assessment purposes and help eliminate unjustifiable determinations of impaired waters based upon an outdated criterion. This amendment will also benefit state agencies that would, otherwise, implement the outmoded criterion.

Amendments proposed to OAC 785:45-5-20, Fish consumption, restore language that clarifies that the criteria for this beneficial use are applicable only to the subcategories of Warm Water Aquatic Community, Cool Water Aquatic Community, or Trout Fishery. A limited number

of municipal and industrial discharges of toxic substances to habitat limited streams identified in the WQS with only limited aquatic community may benefit.

Amendments proposed to Appendix A, Designated Beneficial Uses for Surface Waters, restore paragraphs (c), Limitations for Additional Protection, and (d), Remarks used in Appendices A.1 through A.7. Amendments proposed to Appendices A.1, A.2, A.3, A.4, A.5, A.6, and A.7 edit various waterbody names and identification numbers. State environmental agencies will benefit from the proposed revisions with clear consistent water quality standards.

Amendments proposed to Appendix A.3, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 3, Upper Red River Basin, make the Warm Water Aquatic Community beneficial use subcategory applicable to a segment of Rush Creek. Persons and entities using fish and wildlife and waters downstream of the affected segment will benefit from more appropriate protection of those waters.

Amendments proposed to Appendix A.5, Designated Beneficial Uses of Surface Waters, Water Quality Management Basin 5, Canadian River, designate the Warm Water Aquatic Community beneficial use subcategory for a segment of Wewoka Creek and the Primary Body Contact Recreation beneficial use for a segment of the Canadian River. Persons and entities using waters downstream of the affected segments will benefit from additional protection of those waters.

Amendments proposed to Appendix G, Numerical Criteria to Protect Beneficial Uses, Table 1, will delete a contradictory phrase and restore a footnote lost due to a scrivener's error along with the addition of table formatting. State environmental agencies and other entities implementing the standards will benefit from the proposed rules with clear consistent water quality standards. Proposed new and revised human health criteria in Table 2 will benefit those persons and entities using waters downstream. Consumers of downstream aquatic life and water of the affected segments will benefit from additional and more stringent protection of those waters. Additionally, some dischargers may benefit from relaxed criteria.

Amendments proposed to Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater, include modifications or addition of several sites requested by the DEQ and Corporation Commission. These amendments would provide for special well construction to avoid cross-contamination of other aquifers and/or water treatment to allow safe use of the waters. This will benefit those individuals developing groundwater at these sites with knowledge of special well construction requirements to avoid cross-contamination of other aquifers and assure the quality of groundwater being utilized. All persons that might otherwise be exposed to polluted aquifer water will benefit.

The proposed Appendix H amendment to provide a Class I designation for the entirety of the Arbuckle-Simpson aquifer will benefit the local and downstream municipalities utilizing the Arbuckle-Simpson aquifer for municipal drinking water, it will benefit local businesses dependent upon tourism and recreation, and will generally benefit persons in the overlying area. The amendment is expected to increase water quality protection that will help to maintain or enhance the recreational and environmental qualities of the region. Moreover, the proposed amendment protects an invaluable drinking water source for tens of thousands of Oklahoma citizens.

**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.**

Lacking specific information from state environmental agencies or other affected persons, the OWRB staff expects the proposals to have little to no economic impact on any regulated entity, state agency or the general public except for the following:

Amendments proposed to Appendix A.5, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 5, Canadian River, designating the Warm Water Aquatic Community beneficial use subcategory for a segment of Wewoka Creek, and the Primary Body Contact Recreation beneficial use for a segment of the Canadian River, will probably have limited economic impact upon permitted discharges or political subdivisions in the respective segments. Information from the DEQ indicates that permittees already have appropriate limits and technology in place to address the more stringent criteria associated with the proposal.

Amendments proposed to Appendix G, Numerical Criteria to Protect Beneficial Uses relax criteria for four priority pollutants based on new cancer potency information and the most recent and relevant scientific information. The ambient criteria for 15 priority pollutants have been reduced based on new EPA minimum assumed fish consumption rates, cancer potency information and the most recent and relevant scientific information to protect human health to reduce their toxic or carcinogenic effects. Criteria for six additional chemicals are also proposed. According to the DEQ, priority pollutant scans required of dischargers have identified 44 industrial facilities and 16 municipalities with one or more of the 25 pollutants in their waste water discharge. Potential increased costs for additional treatment, if required for those pollutants, are undetermined and will be dependent upon the nature of the discharge, background concentrations, dilution flows and the discharge permitting process.

Amendments proposed to Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater, modify or add several sites as requested by the DEQ and Corporation Commission that would limit future uses of groundwater at these sites and provide information necessary to protect public health. The Appendix H remarks for the added and revised sites will require special well construction to avoid cross-contamination of other aquifers and/or water treatment to allow safe use of the waters. Some additional costs may be incurred by entities utilizing groundwater at these sites.

Amendments proposed to Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater to provide a Class I designation for the entirety of the Arbuckle-Simpson aquifer have been requested by The Citizens for the Protection of the Arbuckle-Simpson Aquifer (CPASA) and are expected to have little or no new effect on any regulated entity or state agency. However, the OWRB has received letters from Oklahoma Aggregates Association, Oklahoma Independent Petroleum Association and Environmental Federation of Oklahoma conveying concern that there may be possible unintended consequences that their respective classes of regulated entities associated within the Arbuckle Simpson aquifer area could bear the unpredicted costs of the proposed designation.

There are no fee changes included in these proposed amendments.

**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.**

No extraordinary costs or benefits to the OWRB or other agencies are anticipated. State environmental agencies are currently required to enforce the OWQS within their respective areas of jurisdiction. It is not expected that any costs to these agencies from any such enforcement action would be significantly more than current enforcement costs. The proposed rulemaking is not projected to result in a net loss or gain in state revenues. In some cases it may be necessary for the OWRB to conduct additional rulemaking to develop procedures for implementation of the proposed OWQS amendments. If this occurs, some administrative costs will be borne by the OWRB. Lacking specific information from state environmental agencies or other affected persons, OWRB staff anticipates the following costs and benefits to state agencies and implementing entities:

Amendments proposed to OAC 785:45-5-12(f)(1) clarify that the appropriate seasonal temperatures prescribed in Table 1 of Appendix G of OAC 785:45 are appropriate for calculating biochemical oxygen demand (BOD) load. State agencies and regulated entities will benefit from the proposed rules with reduced confusion regarding information used to calculate permits.

Amendments proposed to OAC 785:45-5-19, removing the numerical color criterion applicable for permitting purposes, will facilitate EPA approval of previous revisions of OAC 785:45 removing the numerical color criterion for assessment purposes and help eliminate unjustifiable determinations of impaired waters based upon an outdated criterion and will benefit state agencies responsible implementing the outmoded criterion.

State environmental agencies will benefit from the proposed rules amendments in Appendix A and Appendices A.1 through A.7 with clear consistent water quality standards but this should not have any effect on state revenues.

There are minimal costs associated with implementing the amendments proposed to Appendix G, Numerical Criteria to Protect Beneficial Uses. New permit limits or Best Management Practices may need to be determined for those entities, industrial facilities and municipalities discharging or releasing any of the 25 priority pollutants into the environment. All state environmental agencies will benefit by having criteria for these pollutants promulgated into rule and this should not have any effect on state revenues.

The modifications and addition of several sites in Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater, requested by the DEQ and Corporation Commission that restrict future uses of groundwater and indicate special well construction and water testing and/or water treatment will benefit those state agencies charged with protecting groundwater and implementing OWQS but will not affect state revenue. The proposal to provide a Class I designation for the entirety of the Arbuckle-Simpson aquifer is not expected to result in any costs or benefits to the OWRB or other agency as a result of implementation and enforcement of the proposal.

It is anticipated that the proposed amendments will have no 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.**

Generally, political subdivisions such as municipalities who discharge waste to waters of the state will be affected by permitting agencies' implementation of the rules. Political subdivisions will not be required to "cooperate" *per se* with the OWRB in implementing or enforcing the rules, but they will have to comply with the rules in the course of implementation and enforcement by permitting agencies. With the exception of the following, there are no anticipated economic impacts to political subdivisions associated with these proposals, nor will they require the cooperation of any political subdivisions to implement or enforce:

Amendments proposed to OAC 785:45-5-12(f)(1), clarifying that the appropriate seasonal temperatures prescribed in Table 1 of Appendix G of OAC 785:45 are appropriate for calculating biochemical oxygen demand (BOD) load: Implementation or enforcement of the proposed rules for these procedures already in place may require cooperation from political subdivisions but should not have an economic impact on them.

Amendments proposed to Appendix A.5, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 5, Canadian River designating the Warm Water Aquatic Community beneficial use subcategory for a segment of Wewoka Creek and the Primary Body Contact Recreation beneficial use for a segment of the Canadian River are not expected to have an adverse economic effect upon current permitted discharges to the respective segments.

Amendments proposed in Appendix G, Numerical Criteria to Protect Beneficial Uses, may result in limited economic impacts to political subdivisions such as municipalities that discharge an affected pollutant and will have to comply with the rules in the course of implementation and enforcement by permitting agencies. Cooperation may be required by political subdivisions such as municipalities to implementing waste pretreatment programs as part of their discharge permits to control the toxic or carcinogenetic pollutant.

Amendments proposed to Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater, add or modify several sites identified by the DEQ and Corporation Commission to indicate special well construction to avoid cross-contamination of other aquifers and/or water treatment. This will allow safe use of the waters, matched by local ordinances, and will not be expected to have any adverse economic impact on any political subdivisions but will require their cooperation in implementing or enforcing the proposed rules through the local ordinance.

**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.**

Except as stated in the following paragraphs, OWRB staff expects that the proposed rules will not have an adverse economic effect on "small business" as defined in 75 O.S. § 502:

Amendments proposed to Appendix A.5, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 5, Canadian River, designating the Warm Water Aquatic Community beneficial use subcategory for a segment of Wewoka Creek and the Primary Body

Contact Recreation beneficial use for a segment of the Canadian River may have limited effect upon permitted discharges in the respective segments. Information from the DEQ indicates that most permittees already have appropriate limits and technology in place to address the more stringent criteria associated with the proposal. Implementation of the proposed use change could have an adverse economic effect on small businesses with permitted discharges to these segments, however no impacts have been identified by the DEQ at this time.

Implementation of the proposed rules to Appendix G, Numerical Criteria to Protect Beneficial Uses, may have an adverse economic effect on small businesses and small municipalities with permitted discharges for toxic and carcinogenic pollutants that have become more stringent as a result of this proposal. Some dischargers may benefit from relaxed criteria. Potential increased costs for additional treatment of those pollutants are undetermined and will be dependent upon the nature of the discharge, dilution flows, background concentrations, and current treatment capacity.

Amendments proposed to Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater, may require special well construction to avoid cross-contamination of other aquifers and/or water treatment. This may have an adverse economic effect on small businesses that might seek to develop groundwater in the contaminated areas. The proposal to amend Appendix H to provide a Class I designation for the entirety of the Arbuckle-Simpson aquifer is not believed to have an adverse economic effect on small businesses in the area of the Arbuckle Simpson aquifer. However, the OWRB has received letters from Oklahoma Aggregates Association, Oklahoma Independent Petroleum Association and Environmental Federation of Oklahoma conveying concern that there may be possible unintended consequences that their respective classes of regulated entities associated within the Arbuckle Simpson aquifer area could bear the unpredicted costs of the proposed designation.

#### **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.**

OWRB staff have consulted with other state environmental agencies and solicited input from the public, affected entities and industry representatives on how these proposed rules would impact various activities in the state. OWRB staff have received limited verbal and written responses. With the exception of the following, there are no compliance costs associated with these proposed rules:

Amendments proposed to OAC 785:45-5-12 to clarify that the appropriate seasonal temperatures prescribed in Table 1 of Appendix G of OAC 785:45 are appropriate for calculating BOD load: The proposed revision clarifies and reinforces current procedures for deriving allowable BOD load; therefore there are no additional compliance costs anticipated nor are less intrusive methods required.

Amendments proposed to update Appendix A.5, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 5, Canadian River: OWRB staff have met with affected dischargers and staff of the DEQ. It has been generally concluded that the affected dischargers already have sufficient technology in place to meet any new limits that may arise from the changes of re-designating the Warm Water Aquatic Community beneficial use subcategory for the segment of Wewoka Creek and Primary Body Contact Recreation beneficial

use for the segment of the Canadian River. The proposed amendments are required by the federal Clean Water Act and are less intrusive than EPA promulgation of similar or more restrictive rules.

Amendments proposed to Appendix G include new or revised criteria to protect public health, which are required by the federal Clean Water Act and are less intrusive than EPA promulgation of similar or more restrictive rules. Compliance costs will depend upon how each NPDES permit will be affected by these proposals. Entities discharging any of the 25 identified priority pollutants will be required to perform testing as designated by the DEQ in compliance with the federal Clean Water Act to ensure that all parameters are within limits established in the permit. Any additional costs associated with testing for these new parameters will depend upon whether DEQ determines that there is a reasonable potential for their presence. The proposal retains the 1 chance in 100,000 of developing cancer ( $10^{-5}$ ) lifetime excess cancer risk level, which is within the cancer risk range deemed appropriate by EPA. Comments from the Sierra Club at the informal public meeting suggested that the state should use the more protective 1 chance in 1 million of developing cancer ( $10^{-6}$ ) lifetime excess cancer risk level instead. This would decrease each health-based criterion concentration by a factor of 10 and make them more stringent. Otherwise, there does not appear to be an alternative to this proposal.

Amendments proposed to Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater: Remarks for the added and revised sites will require special well construction to avoid cross-contamination of other aquifers and/or water treatment to allow safe use of the waters. In many cases damages have been paid to affected parties and alternative water sources have been provided. The additional proposal to amend Appendix H to provide a Class I designation for the entirety of the Arbuckle-Simpson aquifer is not associated with any compliance costs. A non-regulatory method would in effect deny classification of the Arbuckle-Simpson as a Class I aquifer. No state or federal rule has been identified at this time that provides for any implementation of specific protection or regulation of the Class I Groundwater designation.

**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.**

Lacking specific information from state environmental agencies or other affected persons, OWRB staff anticipate there will be no effects relating to public health, safety or the environment as a result of these proposed rules, except as follows:

Amendments proposed to OAC 785:45-5-12 clarify and reinforce current procedures for deriving allowable BOD load and will help prevent inadvertent miscalculation of permit limits that could allow violations of the dissolved oxygen criteria and impairment of downstream waters.

Amendments proposed to OAC 785:45-5-13(e), Agriculture, restoring language regarding default low flow will benefit a limited number of dischargers by allowing an assumed dilution flow of one cubic foot per second for calculating permit limits. This revision will not likely impact the agriculture beneficial use because of limited usage of stream water for agricultural purposes at these low flows. Other regulations are in place that prohibit toxic conditions.

Amendments proposed to OAC 785:45-5-19, removing the numerical color criterion applicable for permitting purposes, will facilitate EPA approval of previous revisions of OAC:45 removing the numerical color criterion for assessment purposes and help eliminate unjustifiable determinations of impaired waters based upon an outdated criterion. Other regulations remain in place that prohibit toxic conditions and also prevent any potential adverse effects or risks to public health, safety and the environment.

Amendments proposed to OAC 785:45-5-20, Fish consumption, restore language that clarifies that the criteria for this beneficial use are applicable only to the subcategories of Warm Water Aquatic Community, Cool Water Aquatic Community, or Trout Fishery. The Fish Consumption Use with this proposal will not apply to the Habitat Limited Aquatic Community (HLAC). The amendments proposed are not likely to have an adverse effect on risks to public health and safety and the environment because HLAC waterbodies are so designated because of limited aquatic life and are not likely to provide a significant contribution to a 17.5 gram of fish per day diet.

Amendments proposed to Appendix A.3, Designated Beneficial Uses of Surface Waters, Water Quality Management Basin 3, Upper Red River Basin, make the Warm Water Aquatic Community beneficial use subcategory applicable to a segment of Rush Creek. The proposed revision insures that suitable criteria will be in place to protect the now existing Warm Water Aquatic Community.

Amendments proposed to Appendix A.5, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 5, Canadian River, designating the Warm Water Aquatic Community beneficial use subcategory for a segment of Wewoka Creek and the Primary Body Contact Recreation beneficial use for a segment of the Canadian River insure that suitable criteria will be in place to protect the now existing Warm Water Aquatic Community and Primary Body Contact Uses.

Amendments proposed to Appendix G, Numerical Criteria to Protect Beneficial Uses, may result in environmental improvements through new effluent limits for NPDES permits and targets for total maximum daily loads (TMDL's). The acute ambient concentrations of 15 of the 25 priority pollutants have been recalculated to protect human health based on new and updated scientific information. In addition, four priority pollutants have been relaxed based on new cancer potency information and the most recent and relevant scientific information. The proposal provides new and revised criteria for protecting human health based upon a 1 chance in 100,000 of developing cancer ( $10^{-5}$ ) lifetime excess cancer risk level, which is within the cancer risk range deemed appropriate by EPA. The proposed revisions are also based upon a national assumed average consumption rate of 17.5 grams of fish and shellfish per day. Previous criteria were based upon a consumption rate of only 6.5 grams fish per day. EPA guidance indicates that this level is necessary to protect both sensitive populations that consume larger quantities of fish at a risk level of 1 chance in 10,000 of developing cancer ( $10^{-4}$ ), as well as the general population at the 1 chance in 100,000 of developing cancer ( $10^{-5}$ ) lifetime excess cancer risk level.

Amendments proposed to Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater, should help prevent a well driller from being allowed to inadvertently drill into an area of known contamination or poor water quality. The additional proposal to amend Appendix H to provide a Class I designation for the entirety of the Arbuckle-Simpson aquifer has

no state or federal rule identified at this time that provides for any implementation of specific protection or regulation of the Class I Groundwater designation.

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

There are no anticipated adverse effects to public health, safety or the environment if these proposals are not implemented, except as follows:

Amendments proposed to OAC 785:45-5-12(f)(1) will clarify that the appropriate seasonal temperatures prescribed in Table 1 of Appendix G of OAC 785:45 are appropriate for calculating biochemical oxygen demand (BOD) load. Implementation or enforcement of the current unrevised rules could potentially allow a miscalculation of permit limits and lead to impairment of aquatic communities downstream of permitted discharges.

Amendments proposed to update Appendix A.3, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 3, Upper Red River Basin make the Warm Water Aquatic Community beneficial use subcategory applicable to a segment of Rush Creek. If the proposed rules are not implemented, suitable criteria will not be in place to protect the now existing Warm Water Aquatic Community and could lead to impairment of aquatic communities downstream of permitted discharges.

Amendments proposed to update Appendix A.5, Designated Beneficial Uses of Surface Waters Water Quality Management Basin 5, Canadian River designate the Warm Water Aquatic Community beneficial use subcategory for a segment of Wewoka Creek and the Primary Body Contact Recreation beneficial use for a segment of the Canadian River. If the proposed rules are not implemented, suitable criteria will not be in place to protect the now existing Warm Water Aquatic Community and Primary Body Contact Uses and could lead to impairment of aquatic communities and threaten public health downstream of permitted discharges.

Amendments to Appendix G, Numerical Criteria to Protect Beneficial Uses: Failure to implement these proposed amendments may result in reduced protection for human health and aquatic life and reduced water quality. Of the 25 priority pollutants, 16 have been determined to cause cancer and are considered to be carcinogens. The remaining nine priority pollutants are considered to be toxic and have demonstrated toxicity above certain concentrations.

Amendments proposed to update Appendix H, Beneficial Use Designations for Certain Limited Areas of Groundwater: Under the current state of the rules, it is possible that well drillers may be inadvertently allowed to drill into areas of known poor water quality or other contamination. Such detrimental effects may continue if the proposed rules are not implemented.

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

This rule impact statement was prepared and approved on November 15, 2012 by Phillip Moershel, Section Head, Water Quality Standards Section, Water Quality Programs Division, Oklahoma Water Resources Board.