

2002



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

DEC 29 2003

Mr. Duane A. Smith
Executive Director
Oklahoma Water Resources Board
3800 North Classen Street
Oklahoma City, OK 73118

Attn: 17 page

Phil Moershel

Dear Mr. Smith:

effective as state law July 200

This letter and attachment constitute the results of the U.S. Environmental Protection Agency's (EPA) review of the Oklahoma Water Quality Standards (OWQS, OAC Title 785, Chapter 45) interim revisions, received November 6, 2002, as required under federal regulations at 40 CFR § 131.5. We apologize for the length of time it has taken to conclude this review, but as you aware, we have been working closely with senior officials in Oklahoma as well as in Arkansas on issues related to those standards and their implementation. The "Statement of Joint Principles and Actions", signed by representatives from both states on December 18, 2003, represents an important step forward toward achievement of the standards we are approving today.

Based on the record before it, EPA Region 6 has determined that Oklahoma's total phosphorus criterion for its Scenic Rivers is consistent with the requirements for water quality standards established under the Clean Water Act (CWA). EPA also believes that the compliance schedule provision, which was included as a modification to the numerical phosphorus criterion, represents a reasonable approach to addressing the phosphorus problem in Oklahoma's Scenic Rivers, by allowing dischargers additional time, if needed, to come into compliance with permit limits based on the criterion.

I would like to commend the hard work and efforts put forth by the Oklahoma Water Resources Board (OWRB) and its staff in the preparation of the interim revision package and in addressing many of the previously disapproved revisions to the State's water quality standards. We anticipate working with you to resolve the remaining issues, and to bring the Oklahoma Water Quality Standards into full compliance with the CWA.

Section 303(c) of the Clean Water Act requires EPA to review and approve or disapprove new or revised water quality standards. In today's action, EPA is approving the majority of the new and revised elements of these standards pursuant to the CWA and the federal implementing regulations at 40 CFR Part 131; however, EPA is disapproving four new and revised provisions that are inconsistent with the requirements of the CWA and its implementing regulations. EPA believes that no federal action is required on one provision because it is not a "water quality standard" for purposes of the Clean Water Act. A detailed explanation of the basis for EPA's decision is enclosed.

EPA initiated consultation with the U.S. Fish and Wildlife Service under section 7(a)(2) of the ESA on the Oklahoma water quality standards on November 21, 2002. Section 7(a)(2) requires that federal agencies, in consultation with the Services, ensure that their actions are not likely to jeopardize the existence of federally listed species or result in the adverse modification of designated critical habitat of such species. It is EPA's finding that approval of these standards revisions will have no effect on endangered/threatened species or critical habitat.

This letter constitutes our formal notification of the results of EPA's water quality standards review pursuant to 40 CFR § 131.22. The State is advised of the requirement to adopt replacement water quality standards for OAC Title 785, Chapter 45, consistent with the CWA and federal regulations within 90 days of the receipt of this letter. In the event the State does not take appropriate action, EPA will propose replacement water quality standards for Oklahoma pursuant to Section 303(c)(4) of the CWA and its implementing regulations at 40 CFR Part 131.

If you have any questions or concerns, please contact me at (214) 665-7101 or Jane Watson at (214) 665-7135.

Sincerely,


for Miguel I. Flores
Director
Water Quality Protection Division

Enclosure

cc: Fred Luetner, Office of Science and Technology
Susan Lepow, Office of General Counsel
Jerry Brabander, U.S. Fish and Wildlife Service
Derek Smithee, OWRB
Jon Craig, ODEQ

SUMMARY OF DECISION

EPA Actions on the July 1, 2002 Revisions to the Oklahoma Water Quality Standards

SUBCHAPTER 1. GENERAL PROVISIONS

OAC 785:45-1-2, Definitions -

In the definitions section, prior to the initial definition, a statement is included directing the reader to use the following definitions unless the content clearly indicates otherwise. Oklahoma Water Resources Board (OWRB) has since determined the word "content" was intended to be "context" and has made the substitution.

Action: EPA approves the change.

"Acute test failure" - The OWRB has revised the two definitions, one pertaining to lakes and the other pertaining to streams, to return to the language previously in place prior to the adoption of an "acute mixing zone." Subsequent to adoption of the acute mixing zone it was determined that the implementation of the acute mixing zone was problematic. To prevent problems in the implementation and issuance of Oklahoma Pollutant Discharge Elimination System permits, the OWRB decided to return the definition of acute toxicity to the same definition used previously.

Action: EPA approves the change.

"Acute toxicity" - The OWRB has revised the definition of acute toxicity to mirror the endpoint described in the definition of acute test failure.

Action: EPA approves the change.

"Best Available Technology" - The OWRB has adopted a definition of Best Available Technology, which is not substantially different from the federal definition. Although the new definition is not written in the exact words as the federal definition, it is acceptable.

Action: EPA approves the change.

"Conservative Element" - The OWRB has made a spelling change to correct "volatilization."

Action: EPA approves the change.

"Degradation" - The OWRB has made a change to the definition to reflect the applicability to activities of humans which result in the prolonged impairment of a water body.

Action: EPA approves the change.

"EPA" - The OWRB has several references within the codified water quality standards, implementation procedures and various state policies, guidance and notices to the acronym EPA. With this definition, the OWRB has provided clarification as to the organization to which the acronym refers.

Action: EPA approves the change.

"Fecal coliform" - The OWRB has provided a clarification that all humans, not only man, contribute fecal coliform bacteria.

Action: EPA approves the change.

"Fresh groundwater" - The OWRB has revised the definition of fresh groundwater to double the concentration of total dissolved solids. Region 6 is concerned that the definition may be misleading to many lay people who may consider "fresh groundwater" to mean groundwater of higher quality, not to include contaminated groundwater. However, this definition is outside of the water quality standards programs and not subject to action by EPA Region 6 under this review.

Action: EPA Region 6's Water Quality Standards Program has no authority over groundwater issues that are unrelated to surface water, and thus cannot approve or disapprove of the change.

"MDL" - The OWRB has adopted the industry standard (and EPA's) definition of and acronym for method detection limit.

Action: EPA approves the change.

"Natural source" - The OWRB has provided a clarification that all humans, not only man, may be a source of contamination.

Action: EPA approves the change.

"NTU" - The OWRB has included the acronym and definition for nephelometric turbidity units which is used to report results from the Nephelometric Method, commonly used to measure the scattering of light by particles in a water sample.

Action: EPA approves the change.

"PQL" - The OWRB has adopted a definition and acronym for practical quantitation limit, which is five times the MDL. EPA objected to this definition and provided comments to the OWRB concerning the applicability of PQL to tests such as dissolved oxygen, pH and B.O.D.₅. Because these regulations use the term "PQL" solely for regulating groundwater, EPA Region 6

does not consider this term to be applicable to the water quality standards program as it relates to surface waters, including wetlands.

Action: EPA Region 6's Water Quality Standards Program has no authority over groundwater issues that are unrelated to surface water, and thus cannot approve or disapprove the change.

"Salinity" - The OWRB has changed the definition to correctly reflect salinity as a measurement of concentration and not degrees.

Action: EPA approves the change.

"Seasonal seven-day, two-year low flow" - The OWRB has changed this definition substantially by deleting the description of how the low flow is calculated and by referring to the use of the low flow in permitting. Because the new definition does not describe the precise meaning of low flows, there is possible confusion about whether the flows are calculated on the receiving stream's flow or the effluent flow. The latter would be inappropriate because low flow conditions are used in permitting and site-specific criteria development as a gauge of the dilution attributable to a waterbody during critical conditions, i.e., usually the middle to end of the summer months.

Action: EPA disapproves the change.

To correct the disapproval OWRB must adopt a definition which clearly refers to receiving water, not effluent flow, or reinstate the previous definition.

"Seasonal 7Q2" - Same as above.

Action: EPA disapproves the change.

To correct the disapproval OWRB must adopt a definition which clearly refers to receiving water, not effluent flow, or reinstate the previous definition.

"Seven-day, two-year low flow" - Same as above.

Action: EPA disapproves the change.

To correct the disapproval OWRB must adopt a definition which clearly refers to receiving water, not effluent flow, or reinstate the previous definition.

"7Q2" - Same as above.

Action: EPA disapproves the change.

To correct the disapproval OWRB must adopt a definition which clearly refers to receiving water, not effluent flow, or reinstate the previous definition.

"Standard Methods" - The OWRB has added as a definition the common phrase used to describe the publication *Standard Methods for the Examination of Water and Wastewater*, an industry publication referenced by EPA and all Region 6 states, concerning both the drinking water program and the water quality standards program.

Action: EPA approves the change.

OAC 785:45-1-4, Testing procedures

The OWRB has made changes to reflect the titular nature of the reference to 40 CFR Part 136.

Action: EPA approves the change.

OAC 785:45-5-3, Beneficial uses: default designations

b) **Lakes. (2)** - This provision establishes a beneficial use of Public and Private Water Supplies to be designated for certain lakes as provided in Appendix A of this Chapter. OWRB has removed "*otherwise*" which followed "Chapter" in the sentence noted above.

Action: EPA approves the change.

OAC 785:45-5-4, Applicability of narrative and numerical criteria

(a) The OWRB has added the clause "or establishing site specific criteria" to the applicability of using the greater of 1.0 cfs or 7Q2 as the streamflow used in establishing "permit conditions," unless otherwise provided in OAC 785:45 or OAC 785:46. These changes are consistent with other aspects of the water quality standards.

Action: EPA approves the change.

(e) - The OWRB has revised the references to the numeric criteria for human health protection from fish flesh consumption alone or with ingestion of water as related to water column or fish tissue concentrations to reflect the relocation of the criteria to Appendix G.

Action: EPA approves the change.

PART 3. BENEFICIAL USES AND CRITERIA TO PROTECT USES

OAC:785:45-5-10. Public and private water supplies

(1) Raw Water numerical criteria.

The OWRB has revised this section to reflect the relocation of the criteria to Appendix G.

Action: EPA approves the change.

(6) Water Column criteria to protect for the consumption of fish flesh and water.
The OWRB has revised this section to reflect the relocation of the criteria to Appendix G.

Action: EPA approves the change.

OAC:785:45-5-12 Fish and wildlife propagation

(f)(1)(C) - The OWRB has revised this section to reflect the relocation of the criteria to Appendix G.

Action: EPA approves the change.

(f)(6)(C) - The OWRB has revised this section to reflect the relocation of the criteria to Appendix G.

Action: EPA approves the change.

(f)(6)(D) - The OWRB has revised this section to reflect the relocation of the criteria to Appendix G.

Action: EPA approves the change.

(f)(6)(G) - The OWRB has revised this section to reflect the relocation of the criteria to Appendix G.

Action: EPA approves the change.

(f)(6)(G)(i) - The OWRB has revised this section to reflect the relocation of the criteria to Appendix G.

Action: EPA approves the change.

(f)(6)(G)(ii) - The OWRB has revised this section to reflect the relocation of the criteria to Appendix G.

Action: EPA approves the change.

(f)(6)(H) - The OWRB has revised this section to reflect the relocation of the criteria and conversion factors to Appendix G.

Action: EPA approves the change.

(f)(7)(A)(i) - The OWRB has substituted the acronym for the actual name of nephelometric turbidity units (NTUs), the nephelometric measurement for turbidity.

Action: EPA approves the change.

(f)(7)(A)(ii) - The OWRB has substituted the acronym for the actual name of nephelometric turbidity units (NTUs), the nephelometric measurement for turbidity.

Action: EPA approves the change.

(f)(7)(A)(iii) - The OWRB has substituted the acronym for the actual name of nephelometric turbidity units (NTUs), the nephelometric measurement for turbidity.

Action: EPA approves the change.

(f)(7)(C) - The OWRB has changed the reference from criteria listed "above" to criteria listed "in (A) of this paragraph" to prevent confusion.

Action: EPA approves the change.

(f)(7)(E) - The OWRB has eliminated this provision and added the language that defines NTUs as a definition in OAC:785:45-1-2.

Action: EPA approves the change.

OAC:785:45-5-13 Agriculture: livestock and irrigation

(d) - The OWRB is changing a citation from "the table following subsection (g) of this Section and 785-1-2 calculated for that segment" to "the table in Appendix F of this Chapter".

Action: EPA approves the change.

OAC:785:45-5-16 Primary Body Contact Recreation

(c)(2) - The OWRB has added the terms "body contact" to this subsection when referring to primary recreation, which is consistent with the previously adopted language and OWRB's description of primary recreation.

Action: EPA approves the change.

(c)(3) - The OWRB has added the terms "body contact" to this subsection when referring to primary recreation. See above.

Action: EPA approves the change.

OAC:785:45-5-19 Aesthetics

(a) - The OWRB has revised the language in this subsection from "water of the State" to "waters of the state".

Action: EPA approves the change.

(c)(1) **Color.** - The OWRB has changed the term "State" to "state".

Action: EPA approves the change.

(c)(2) **Nutrients.** -

(A) **Narrative criterion applicable to all waters of the state.** The OWRB has revised this subsection to identify that the in-place narrative criterion is applicable to all waters of the state.

Action: EPA approves the change.

(B) - **Numerical criterion applicable to waters designated Scenic Rivers.** Through revisions to Section 785:45-5-19 of the Oklahoma Administrative Code (OAC), OWRB has adopted a nutrient criterion for total phosphorus of 0.037 mg/L for all Oklahoma water bodies designated as Scenic Rivers. Attainment will be based on the thirty (30) day geometric mean total phosphorus concentration in waters designated Scenic Rivers in Appendix A of Chapter 45. Additional language in the rule states that "such criterion shall be fully implemented within ten (10) years as provided in a separate rule promulgated by the Board." OAC § 785:45-5-19(c)(2)(B). The separate rule promulgated by the Board is OAC Section 785:45-2-28, which at the time of the OWRB's submittal was an emergency rule effective May 6, 2002. The emergency rule was promulgated to clarify the July 1, 2002, effective date of the 0.037 mg/L numerical criterion established by OAC Section 785:45-5-19 and the June 30, 2012, deadline for full implementation of the criterion.

OAC Sections 785:45-5-19 and 785:45-5-28 establish effective July 1, 2002, a numerical water quality standard for total phosphorus of 0.037 mg/L for Oklahoma's six (6) Scenic Rivers, modified by a compliance schedule provision allowing point source dischargers up to ten (10) years from July 1, 2002, or until June 30, 2012, to come into compliance with effluent limitations based on the numerical criterion. Once approved by EPA, the 0.037 mg/L standard is fully effective for CWA purposes. Compliance schedules will be available as needed not only for dischargers within Oklahoma, but for dischargers located in neighboring states as well.

OWRB explained the need for a numerical phosphorus criterion for its Scenic Rivers in its water quality standards revision package. The agency stated that both empirical and anecdotal evidence over the past twenty (20) years indicates that excess nutrients, primarily excess phosphorus, "are causing accelerated primary productivity in the Illinois, resulting in significant growths of both attached algae (periphyton) and suspended algae (phytoplankton). As a consequence, historical river clarity and substrate quality are being adversely affected to such an extent that, without intervention, the Illinois River's exceptional ecological and recreational significance is in jeopardy." Justification for Revisions to Oklahoma's Water Quality Standards OAC 785:45: Rationale for Promulgation of an 0.037 mg/L Total Phosphorus Criteria for Scenic River Protection, Page 1 of Tab 11 to OWRB's November 6, 2002, submittal. OWRB noted that, although less pronounced and obvious to the public, similar signs of adverse impacts from excess nutrients had been noted in Oklahoma's other five (5) Scenic Rivers. Id., Page 1.

Adoption of nutrient criteria by the State of Oklahoma is consistent with EPA's Notice of National Strategy for Development of Regional Nutrient Criteria, published in the Federal Register of June 25, 1998 (Volume 63, Number 122, pages 34648-64650). EPA expects all States and Tribes to adopt and implement numerical nutrient criteria into their water quality standards by December 31, 2003.

The OWRB cited as the basis for justification of its 0.037 mg/L total phosphorus criterion the United States Geological Survey (USGS) study and report, *Nutrient Concentrations and Yields in Undeveloped Basins of the United States*. In the report summary statistics were calculated for percentile values (10%, 25%, 50%, 75%, and 90%) of the flow-weighted mean stream values for several nutrient descriptors, including total phosphorus. OWRB adopted a total phosphorus concentration, based on the values included in the report as Table 1, of 0.037 mg/L representing the 75th percentile value of undeveloped streams, analogous to the methodology sanctioned by EPA in developing its recommended ecoregion based nutrient criteria, except that it is not tailored to any particular ecoregion nor inclusive of data from the ecoregion to which it is applied.

Under 40 CFR § 131.11, EPA has recommended three options for developing numeric nutrient criteria: 1) based on 304(a) Guidance, or 2) based on 304(a) Guidance modified to reflect site-specific conditions, or 3) based on other scientifically defensible methods. The state utilized the third option, employing a method similar to the EPA methodology, but developed using a national database of reference (undeveloped or "least impacted") streams. EPA used ecoregion data for all streams and reference streams as the basis for nutrient criteria. If nutrient concentrations were considered for all streams in an ecoregion, EPA selected the 25th percentile value for the criterion value. If nutrient concentrations were used from only reference streams, the 75th percentile value was chosen. Considering undeveloped watersheds as analogous to reference streams, EPA would expect, as the OWRB did, to adopt a criterion using the 75th percentile value.

Portions of the six Oklahoma Scenic Rivers are included in the five Level III ecoregions that were utilized by EPA in development of the national recommended nutrient criteria. For these five ecoregions, the range of the recommended criteria was from 0.005 mg/L to 0.05 mg/L. [EPA-822-B-00-019, EPA-822-B-00-020] Oklahoma's adopted criteria of 0.037 mg/L falls within the range recommended.

It is important to note that EPA reviews a state water quality criterion to determine whether the proposed standards are stringent enough to comply with the requirements of the CWA and meet the states' designated uses. States are free to adopt a water quality criterion that is more stringent than necessary to comply with the minimum requirements of the CWA. The CWA allows states to force technological advancement to attain higher water quality through the enactment of stringent water quality goals. See *City of Albuquerque v. Browner*, 97 F.3d 415 (10th Cir. 1996). Based on the record before it, EPA has determined that Oklahoma's total phosphorus criterion of 0.037 mg/L for its Scenic Rivers is sufficient to protect the designated uses of the affected rivers¹ and is consistent with the requirements for water quality standards established by the CWA and 40 CFR Part 131.

To address whether the outcome of Oklahoma's analysis is representative, scientifically defensible, and protective of Oklahoma's waters, EPA independently considered several other sources of data and information. One important source of information was a USGS report entitled *Percentile Distributions of Median Nitrite Plus Nitrate as Nitrogen, Total Nitrogen, and Total Phosphorus Concentrations in Oklahoma Streams, 1973-2001 (Report 03-4084)*. This report included total phosphorus data for streams in the Ozark Highlands ecoregion. The appropriate percentile values of median concentrations for various stream groups fully support Oklahoma's adopted criterion value. The 75th percentile of high gradient smaller streams (stream orders 1, 2 and 3), where data may be more representative of reference quality conditions and the effects of human development activities are likely to be minimal, is 0.040 mg/L. The 25th percentile of low gradient smaller streams and all larger streams (stream order 4 and above), where data are likely to be more representative of general conditions and the effects of human development activities are likely more than minimal, is 0.035 mg/L and 0.050 mg/L, respectively. These reported values corroborate that Oklahoma's adopted criterion is scientifically defensible and protective. In a separate analysis, USGS, in conjunction with EPA Region 6, calculated percentiles for different stream sizes in the Illinois basin using data collected from 1990 to 2001. The data indicated that small streams have lower criteria than larger ones if calculated separately, and that when various stream sizes are combined, the criterion is consistent with that adopted by the state.

¹A December 9, 2003, letter from the Arkansas Attorney General's Office raised the issue of how different uses of a stream should be considered. That issue relates to use designations, not to the question of whether a criterion is protective of a given designated use. Today's approval concerns a criterion, not a designation of use.

Because, as noted above, Oklahoma's 0.037 mg/L criterion for total phosphorus in its Scenic Rivers is modified by a compliance schedule provision allowing point source dischargers up to ten (10) years from July 1, 2002, or until June 30, 2012, to come into compliance with permit limits based on the criterion, EPA must review not only the numerical criterion, but the compliance schedule provision as well to ensure consistency with the CWA and its implementing regulations. Regulations at 40 CFR § 122.47 provide for CWA schedules of compliance for NPDES permit limitations reflecting water quality standards when appropriate, but mandate that such schedules require compliance with the limitations as soon as possible.

Further work remains to be done to support implementation of Oklahoma's 0.037 mg/L phosphorus criterion. TMDLs have not been completed and neither the regulatory authorities nor the point sources themselves have all the data necessary to fully understand the exact nature and location of all phosphorus loadings to the watersheds or what the appropriate loadings for every individual discharger should be. Experts are still discussing the appropriate phosphorus index to be used, as well as the best approach for removing existing excess phosphorus. Putting the final pieces of this puzzle in place will take time, and even after final decisions are made regarding appropriate loadings for all dischargers, the cost of implementing necessary treatment or other controls may be high. Given the complexity of the issue, the amount of data yet to be gathered and the costs involved, EPA believes the compliance schedule provision included by OWRB as a modification to its numerical phosphorus criterion augments rather than undercuts the 0.037 mg/L standard by allowing dischargers the additional time to comply if it is needed.

In implementing this compliance schedule provision, Oklahoma, in conjunction with the State of Arkansas², has arrived at a tiered approach to addressing the problem of excess phosphorus in Oklahoma's Scenic Rivers. Under this tiered approach, the existing point source dischargers to the shared Oklahoma Scenic Rivers watersheds with a design capacity of greater than 1 million gallons per day (MGD), specifically the cities of Fayetteville, Rogers, Springdale, Siloam Springs and Bentonville, Arkansas, will be issued NPDES permits containing an effluent limit for total phosphorus of 1 mg/L pursuant to the schedule of compliance set out below. The city of Tahlequah, Oklahoma already meets this limit pursuant to an NPDES permit issued in 1992. In addition, the city of Westville, Oklahoma has a permitted design capacity of 0.28 MGD, however, it is under a compliance order to achieve a 1 mg/L phosphorus effluent limit and a 2.34 lb/day phosphorus loading limit by 2004. EPA believes such limits are allowable under Oklahoma's 0.037 mg/L phosphorus criterion as modified by the compliance schedule.

²Five of the six Scenic Rivers currently affected by Oklahoma's 0.037 mg/L criterion for total phosphorus flow from Arkansas into Oklahoma and Arkansas has a number of point and non point source dischargers to the Oklahoma/Arkansas shared Scenic Rivers watersheds.

Schedule for large cities to comply with 1 mg/L effluent limit:

- Rogers – to meet 1 mg/L limit starting in 2004
- Springdale – expansion to meet 1 mg/L limit starting in 2007
- Siloam Springs – expansion to meet 1 mg/L limit starting in 2009
- Fayetteville – existing facility already complies; new facility to meet 1 mg/L limit once operational (circa 2005)
- Bentonville – new facility to meet 1 mg/L limit once operational (date unknown)

In addition, the States of Oklahoma and Arkansas will work aggressively with those Arkansas and Oklahoma entities with existing design capacities of less than 1 MGD but greater than or equal to 0.5 MGD to reduce the level of phosphorus in their discharges to the maximum extent possible through voluntary controls aimed at reaching either 1 mg/L total phosphorus or a phosphorus loading limit based on 1 MGD of flow and an effluent concentration of 1 mg/L total phosphorus. The intent to implement these limits and controls is memorialized in a “Statement of Joint Principles and Actions” signed by the Oklahoma Secretary of Environment, the Oklahoma Water Resources Board, the Oklahoma Department of Environmental Quality, the Oklahoma Scenic Rivers Commission, the Arkansas Department of Environmental Quality and the Arkansas Soil and Water Conservation Commission on December 18, 2003.

EPA believes the commitments made by the States of Oklahoma and Arkansas, acting through their environmental agencies, and as reflected in the Statement of Joint Principles and Actions signed by those agencies on December 18, 2003, represent very positive steps toward improving water quality in the shared Oklahoma Scenic Rivers Watersheds, which is consistent with achieving compliance with the State of Oklahoma’s 0.037 mg/L criterion for total phosphorus in that State’s Scenic Rivers.

At this time, and in light of the other phosphorus reducing measures currently being implemented, and to be implemented, in the affected waterways (as discussed below), EPA supports the decision made by Oklahoma and Arkansas to allow the point source dischargers covered by the Statement of Joint Principles and Actions to initially reduce their effluent concentrations through permit limits of 1 mg/L total phosphorus or through voluntary measures. Considering loadings to the affected watershed are greatly affected by non point source discharges (likely greater than 50% of the phosphorus loading) and because measures are underway to reduce those non point source loadings, EPA believes it is reasonable to limit the specified point source dischargers as agreed to in that this should result in reasonable further progress toward achieving the 0.037 mg/L instream goal by the June 30, 2012, deadline.

EPA believes the tiered approach to implementing Oklahoma’s proposed compliance schedule provision, including the implementation of the above discussed measures, is a reasonable approach to beginning to address the phosphorus problem in Oklahoma’s Scenic Rivers and to achieving water quality goals. EPA expects reasonable further progress in meeting water quality goals if the specified measures are put in place. Preliminary estimates made by

researchers at the University of Arkansas indicate that four major point source dischargers in the Illinois River Drainage Area, identified in Nelson et. al. (2002)³, account for about 40% of the output of phosphorus in the Illinois River just upstream of the river's flow into Oklahoma, where the criterion is applicable. These same estimates indicate that reductions in the phosphorus concentration of their discharges to 1.0 mg/L as a sole measure would likely reduce concentrations in the Illinois River as it enters Oklahoma by 30%.

The tiered approach toward achieving water quality goals is bolstered by the implementation of various other measures aimed at further reducing phosphorus in the affected watersheds by Oklahoma, as well as neighboring States. These measures include a commitment by the Oklahoma Secretary of the Environment, the Oklahoma Attorney General, the Arkansas Department of Environmental Quality and the Arkansas Soil & Water Conservation Commission to develop a joint phosphorus index between the States of Oklahoma and Arkansas. This commitment was reflected in a letter dated April 4, 2003, from those four entities to Oklahoma State University and the University of Arkansas, requesting technical assistance from the two universities in crafting an appropriate index. With regard to nonpoint sources, the State of Arkansas recently enacted legislation declaring certain areas, including the Illinois River Watershed, to be nutrient surplus areas for phosphorus and nitrogen. The new legislation makes it a violation of State law to apply designated nutrients within a nutrient surplus area except in compliance with a State approved nutrient management plan or at a protective rate established by the State. Arkansas also enacted legislation requiring the certification of persons preparing nutrient management plans and of persons making nutrient application, as well as legislation mandating the establishment of an annual registration program to assemble and maintain information on the number, composition, and practices of poultry feeding operations in the State, including the land application practices used by each individual poultry feeding operation, and the amount of litter stored, applied and transferred by each operation. EPA expects substantial progress will result from the nonpoint measures stemming from this Arkansas enabling legislation. For example, reducing by half the application of animal manure, litter and sludge in the Illinois River Drainage Area in favor of nitrogen fertilizer, in concert with the point source controls, could achieve a 60% reduction in phosphorus concentrations in the Illinois River.

In addition to the other measures discussed, there will be actions internal to both Oklahoma and neighboring States as they work to develop Total Maximum Daily Loads (TMDLs) or Watershed Plans for streams listed as impaired on the federal CWA 303(d) list. EPA believes implementation of these various measures, in conjunction with the phosphorus reductions ultimately achieved by the point source dischargers to the affected watersheds, should ensure reasonable and steady progress toward meeting the 0.037 mg/L instream goal by the June 30, 2012, deadline for compliance provided by OWRB.

³Reference: Nelson, M. A., K. L. White, and T. S. Soerens. 2002. Illinois River phosphorus sampling results and mass balance computation. Proceedings from Arkansas Water Resources Center Conference on "Adequate Quality Water Supplies to Meet Our Growing Needs: Scientific, Regulatory, and Public Perspectives", Fayetteville, AR.

As a result, EPA believes not only that the compliance schedule provision included by OWRB as a modification to its numerical phosphorus criterion augments rather than undercuts the 0.037 mg/L standard by allowing dischargers additional time, if needed, to come into compliance with permit limits based on the criterion, but also that the tiered approach toward implementation of the numerical criterion as modified by the compliance schedule provision adopted by Oklahoma is a reasonable approach to addressing the phosphorus problem in Oklahoma's Scenic Rivers and ultimately achieving compliance with the 0.037 mg/L phosphorus standard.

Although EPA believes this tiered approach, including the limits and controls to be met by point source dischargers to the shared Oklahoma Scenic Rivers watersheds, is a reasonable approach to achieving water quality goals, EPA realizes the success of the approach is dependent on many inter-related factors. EPA will be monitoring the situation over the course of the compliance period to ensure that sufficient progress toward achieving these goals by the June 30, 2012, deadline is indeed being made.

Action: EPA has determined a numerical criterion for total phosphorus of 0.037 mg/L for Oklahoma Scenic Rivers, modified by a provision for compliance schedules of up to ten (10) years from July 1, 2002, or until June 30, 2012, as needed to attain compliance as soon as possible with effluent limitations reflecting the numerical criterion, is consistent with the requirements for water quality standards established by the CWA and 40 CFR Part 131. EPA approves the change.

OAC:785:45-5-20. Fish Consumption

(a) **General.** The OWRB has revised this subsection to reflect the relocation of the criteria from the individual subsections to the tables in Appendix G.

Action: EPA approves the change.

(b) **Water column criteria to protect for the consumption of fish flesh.** The OWRB has revised this subsection to reflect the relocation of the criteria from the individual subsections to the tables in Appendix G.

Action: EPA approves the change.

PART 5. SPECIAL PROVISIONS

OAC:785:45-5-25(d). Implementation Policies for the Antidegradation Policy Statement.

As discussed above, through revisions to Sections 785:45-5-19 and 785:45-5-28 of the Oklahoma Administrative Code (OAC), the OWRB has adopted a thirty (30) day geometric mean total phosphorus criterion of 0.037 mg/L applicable to all water bodies designated as "Scenic Rivers" modified by a provision allowing for compliance schedules of up to ten (10)

years from July 1, 2002, for dischargers to come into compliance with regulatory limitations necessary for instream achievement of that criterion. The OWRB has also revised OAC Section 785:45-5-25(d) to incorporate the same criterion and compliance schedule in the State's Antidegradation Policy Statement.

EPA's review of implementation procedures is limited to ensuring that procedures are included that describe how the State will implement the required elements of the antidegradation review. The EPA is approving the adoption of the criterion and compliance schedule in OAC Sections 785:45-5-19 and 785:45-5-28. However, we find the procedures in this provision do not specify how the State will determine on a case-by-case basis whether, and to what extent, assimilative capacity in the States waters may be preserved or used. Specifically, if a water body has a lower total phosphorous concentration than established by the criterion, water quality may be lowered to that level, effectively circumventing the intent and purpose of the antidegradation policy.

Given the qualifying statement that it "applies in addition to, and shall be construed so as to be consistent with, any other provision of this chapter," and appropriate inclusion of the same criterion and compliance schedule provision elsewhere in the standards, EPA regards Section 785:45-5-25(d) as conceptually foreign to an antidegradation policy as that term is understood under the Clean Water Act. As such, OAC Section 785:45-5-25(d) is not a "water quality standard" at all and CWA Section 303(c)(3) does not require EPA to either approve or disapprove it.

Action: This provision in the State's regulation is not "a water quality standard" for purposes of the Clean Water Act, and does not require EPA action.

Appendix A

DESIGNATED BENEFICIAL USES FOR SURFACE WATERS

OAC:785:45 APPENDIX A

(b) **Beneficial Use Designations.** OWRB has clarified the use of a (●) to indicate the inclusion of the beneficial use, represented by the column wherein the use is specified, for a segment or waterbody.

Action: EPA approves the change.

Garland Creek, Segment No. 410100

OWRB has revised the beneficial uses for Garland Creek to return the beneficial uses previously designated for Garland Creek. In March, 2000 EPA Region 6 disapproved the change in the beneficial use designation from warm water aquatic community to habitat limited aquatic community. Subsequent studies determined that Garland Creek was not habitat limited and the

OWRB is now correcting that decision to reflect the expectation that Garland Creek should provide adequate habitat to support a warm water aquatic community.

Action: EPA approves of the change.

Mine Creek, Segment No. 410210

OWRB is correcting an omission from a previous water quality standards revision. In this correction OWRB is incorporating a beneficial use designation of aesthetics, as previously determined, but omitted from the previous revision.

Action: EPA approves of the revision.

Appendix E

Site-Specific Criteria for Copper on North Canadian (OG&E)

Region 6 has reviewed the document and additional information submitted by OWRB and USGS. The site-specific criterion is acceptable as prepared in the water effect ratio document submitted by OG&E.

Action: EPA approves the change.