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Environmental Protection Agency

40 CFR Part 131

Water Quality Standards for Kansas; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 131

[FRL–OW–6721–3]

RIN 2040–ZA00

Water Quality Standards for Kansas

AGENCY: Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: EPA is proposing water quality standards for the State of Kansas. If promulgated as final standards, they would supersede aspects of Kansas's water quality standards that EPA disapproved in 1998. In furtherance of EPA's 1998 disapproval action, EPA is proposing: that all discharges to stream segments for which continuous flow is sustained primarily through the discharge of treated effluent shall protect the States' designated uses; 7Q10, 4B3, or other scientifically defensible design flows approved by EPA shall be used to implement the State's chronic aquatic life criteria; 1Q10, 1B3, or other scientifically defensible design flows approved by EPA shall be used to implement the State's acute aquatic life criteria; implementation procedures for use when applying the States' antidegradation policy to determine whether to allow a lowering of surface water quality by point sources of pollution where nonpoint sources also contribute the pollutant of concern to that body of water; an aquatic life use for one stream segment and a primary contact recreation use for 1,292 stream segments and 164 lakes.

In addition, under its discretionary authority to address State standards that the Administrator determines are inconsistent with the Clean Water Act, EPA is proposing: that water quality standards in Kansas apply to all privately owned surface waters in Kansas that are waters of the U.S.; and numeric human health criteria for alpha- and beta-endosulfan.

DATES: EPA will accept public comments on this proposed rule until September 1, 2000. Comments postmarked after this date may not be considered. On July 27, 2000, EPA is holding two public hearings on today's proposed water quality standards for Kansas.

ADDRESSES: An original plus 2 copies, and if possible an electronic version of comments either in WordPerfect or ASCII format, should be addressed to Ann Jacobs at *jacobs.ann@epa.gov* or at U.S. EPA Region VII, Water Resources Protection Branch, 901 North 5th Street, Kansas City, Kansas 66101.

The public hearings will be held in the Ballroom of the Days Inn at 914 S.E. Madison in Topeka, Kansas. The first is scheduled for 2:30–5:30 p.m. (CDT), and the second for 7–9 p.m. (CDT).

The administrative record for today's proposed rule is available for public inspection at EPA Region VII, Regional Records Center, 901 North 5th Street, Kansas City, Kansas 66101, between 8 a.m. and 4:30 p.m.

FOR FURTHER INFORMATION CONTACT: Ann Jacobs at *jacobs.ann@epa.gov* or at U.S. EPA Region VII, Water Resources Protection Branch, 901 North 5th Street, Kansas City, Kansas 66101 (Telephone: 913–551–7930).

SUPPLEMENTARY INFORMATION:

Preamble Outline

I. Potentially Affected Entities

Citizens concerned with water quality in Kansas may be interested in this proposed rulemaking. Entities discharging pollutants to waters of the United States in Kansas could be indirectly affected by this proposed rulemaking since water quality standards are used in determining water quality-based National Pollutant Discharge Elimination System (NPDES) permit limits. Categories and entities that may indirectly be affected include:

Category	Examples of potentially affected entities
Industry	Industries discharging pollutants to surface waters in Kansas.
Municipalities	Publicly-owned treatment works discharging pollutants to surface waters in Kansas.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding NPDES entities likely to be affected by this action. This table lists the types of entities that EPA is now aware could potentially be affected by this action. Other types of entities not listed in this table could also be affected. To determine whether your facility may be affected by this action, you should carefully examine today's proposed rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

II. Background

A. What Are the Statutory and Regulatory Requirements That Are Relevant to This Action?

Under section 303(c) of the Clean Water Act (CWA), 33 U.S.C. 1313(c), States and Tribes are required to develop water quality standards for waters of the United States within their jurisdiction. Section 303(c) and EPA's implementing regulations at 40 CFR part 131 require State water quality standards to include the designated use or uses to be made of the water, the criteria necessary to protect those uses, and an antidegradation policy. States are required to review their water quality standards at least once every three years and, if appropriate, revise or adopt new standards. 33 U.S.C. 1313(c). States are required to submit the results of these triennial reviews to EPA. EPA is to approve or disapprove any new or revised standards. States may include in their standards policies generally affecting the standards' application and implementation. See 40 CFR 131.13. These policies are subject to EPA review and approval. See 40 CFR 131.6(f), 40 CFR 131.13. Section 303(c)(4) of the CWA authorizes EPA to promulgate water quality standards when necessary to supersede disapproved State water quality standards, or in any case where the Administrator determines that new or revised standards are necessary to meet the requirements of the CWA.

B. What Actions Have Kansas and EPA Taken Leading to Today's Action?

On October 31, 1994, Kansas submitted a complete set of water quality standards to EPA for review and approval. In a February 19, 1998, letter from U. Gale Hutton, Region VII Director of the Water, Wetlands and Pesticides Division, to Gary R. Mitchell, Secretary of the Kansas Department of Health and Environment (KDHE), EPA reviewed and approved in part and disapproved in part all of the State's new or revised standards. Specifically, EPA's letter of February 19, 1998, (hereafter EPA's 1998 disapproval letter or EPA's 1998 action) disapproved the following provisions of Kansas' 1994 water quality standards:

- The State's antidegradation policy to the extent that it applied to protections for so-called Tier 3 waters;
- Provisions governing discharges from waste stabilization ponds;
- Disinfection requirements;
- Provisions addressing the adoption of water quality criteria for the protection of the State's domestic water supply use;
- A number of water quality criteria;
- The State's water quality standards implementation procedures;
- The State's antidegradation implementation procedures;
- Use designations for 1,485 waters with classified uses;
- The State's water quality standards provisions for assumed stream design flows in applying water quality criteria; and,
- Provisions relating to waters with effluent-created habitat.

In the letter disapproving these provisions, Region VII also stated that it was requesting the EPA Administrator to make a determination under CWA section 303(c)(4)(B) that an existing provision in the State's water quality standards that exempted certain privately owned surface waters from the State's water quality standards is inconsistent with the CWA to the extent it exempts privately owned surface waters that are waters of the United States.

In June 1999, Kansas completed a triennial review of its water quality standards. As part of that review, Kansas adopted revisions to the Kansas Administrative Regulations (K.A.R.), Title 28, Article 16, on June 29, 1999, including the adoption of new or revised water quality standards. These new or revised water quality standards became effective under State law on June 30, 1999. (These revisions are hereafter referred to as the 1999 revisions to the Kansas water quality standards.) Kansas submitted these standards for EPA review and approval on August 10, 1999, as required under Federal regulations at 40 CFR 131.5. In its submission, KDHE corrected several provisions disapproved by EPA in its February 1998 disapproval letter to make them consistent with the CWA. By letter dated January 19, 2000, EPA Region VII approved many of these new or revised portions of the States' water quality standards. EPA's approval of these new or revised standards eliminated the need for a Federal promulgation to correct many of the previously disapproved provisions. These provisions are discussed in section III.

Today's proposal addresses the remaining standards disapproved by EPA in its 1998 action by proposing replacement water quality standards for the State of Kansas. The proposed regulations are discussed in section IV.

III. What Disapproved Provisions Have Been Addressed?

As discussed in section II. B., Kansas completed its most recent triennial review in June 1999 and submitted the resulting new or revised water quality standards to EPA for review and approval on August 10, 1999. By letter dated January 19, 2000, EPA Region VII approved the submission in part and disapproved it in part. Among the provisions approved by EPA were new or revised water quality standards that addressed provisions previously disapproved by EPA in its 1998 action. In the case of the standards changes discussed later in this section, EPA in its January 19, 2000, letter determined that Kansas adopted new or revised standards consistent with the CWA and EPA's implementing regulations. Under CWA section 303(c)(4), this action by Kansas eliminated the need for EPA to promulgate replacement water quality standards addressing these provisions. Therefore, EPA is not proposing water quality standards for the following provisions.

A. Antidegradation Policy To Protect Outstanding Natural Resource Waters

The State of Kansas revised portions of its antidegradation provisions at K.A.R. 28–16–28c(a) as part of its triennial review in 1994. In its 1998 action, EPA disapproved a portion of the State's antidegradation provisions because the provisions failed to include an appropriate level of protection for high quality waters constituting outstanding national resource waters (ONRWs) as required by 40 CFR 131.12(a)(3). This level of protection is commonly referred to as ''Tier 3.'' The

State's 1994 submittal included specific revisions to mixing zone provisions at K.A.R. 28–16–28c(b)(2)(C)(i) that provided for placement of mixing zones in what Kansas identified as its Outstanding Natural Resource Waters, allowing a permanent lowering of water quality in at least a portion of such waters. This modification to the State regulations reduced the level of protection that previously had been provided to the State's Outstanding Natural Resource Waters and was not consistent with Federal regulations requiring that the water quality of ONRWs be maintained and protected.

EPA's interpretation of the Federal requirements for ONRWs emphasizes restriction of new or increased discharges to such waters. Although this interpretation of the regulation is not the only means of assuring that the water quality will be maintained and protected in ONRWs, the new or revised State water quality standards of 1994 deviated significantly from this level of protection and provided no commensurate level of protection. Without providing a level of protection equivalent to that provided under 40 CFR 131.12(a)(3), the State antidegradation policy was not complete because it did not provide for a category of waters where new or increased discharges are prohibited. Regardless of whether there are current or future State waters designated as ONRWs, the State's water quality standards must provide the opportunity for such designation.

As part of its 1999 revisions to the Kansas water quality standards, the State added a fourth level of protection under its antidegradation provisions. The States' standards now include a definition for outstanding national resource waters, which include surface waters or surface water segments of extraordinary recreational or ecological significance, and which are to be afforded the highest level of water quality protection under the antidegradation provisions. Kansas' new or revised water quality standards at K.A.R. 28–16–28c(a)(3) require maintenance and protection of existing uses and existing water quality in these waters with a prohibition against new or expanded discharges. In its review of these new or revised provisions, EPA determined by letter dated January 19, 2000, that the State's 1999 revisions to the water quality standards provide protection to high quality waters constituting an outstanding national resource as required at 40 CFR 131.12(a)(3). EPA's approval of the State's revision eliminated the need for EPA to promulgate Federal replacement water quality standards for Tier 3 protection.

B. Waste Stabilization Ponds

As part of the State's 1994 revision of its water quality standards, Kansas adopted a provision at K.A.R. 28–16–28c(d)(3) that waived NPDES permitting requirements for determining the reasonable potential of certain waste stabilization pond discharges to violate water quality standards for ammonia and fecal coliform bacteria. In its 1998 disapproval letter, EPA stated that this provision circumvented the application of water quality standards and would not ensure that such discharges meet State water quality standards as required by 40 CFR 122.44(d).

In its 1999 revisions to its water quality standards, Kansas removed K.A.R. 28–16–28c(d)(3) from the State's water quality standards regulations. EPA approved this revision to the State's water quality standards on January 19, 2000, eliminating the need for promulgation of Federal standards.

C. Disinfection Requirements

In its February 19, 1998, disapproval letter to KDHE, EPA also disapproved revised regulations at K.A.R. 28–16–28c(d)(4), which allowed dischargers to avoid disinfection requirements regardless of a water body's designation for primary contact recreation. The State's regulations at K.A.R. 28–16–28c(d)(4) required disinfection of wastewater only if the KDHE determined that such a discharge will result in a threat to public health. This provision relied on information indicating whether or not the water body is known or likely to be used for either primary or secondary recreation, or domestic water supply, rather than upon the waterbody's use designation specified in the State's water quality standards.

In its 1998 disapproval of this provision, EPA stated that the need for disinfection of wastewater effluent must be a function of the need to protect designated uses based on a determination that the discharge has a reasonable potential to cause or contribute to an excursion of applicable water quality standards, regardless of any demonstration at the time of permit issuance regarding whether the public actually utilizes that water body for the use or uses designated in the States' standards. Because all waters of the State are designated for secondary contact recreation by default, implementation of this provision could potentially undermine the State's efforts to comply with Federal regulations at 40 CFR 122.44(d) in writing limitations for NPDES permits that derive from and comply with State water quality standards and, specifically, protect designated uses.

As part of Kansas' 1999 revisions to its water quality standards, this provision was revised and moved to K.A.R. 28–16–28e(c)(7)(D). EPA approved this revision on January 19, 2000, because it now requires disinfection of wastewater where there is a reasonable potential for discharges to exceed the applicable criteria supporting the assigned recreational use designation. EPA's approval of the 1999 revision to the State's water quality standards regarding disinfection requirements eliminated the need for promulgation of Federal standards.

D. Domestic Water Supply Criteria

In its 1998 disapproval, EPA disapproved K.A.R. 28–16–28e(c)(3)(C) because it appeared to limit State adoption of water quality criteria for the protection of domestic water supplies to levels equivalent to the Federally adopted maximum contaminant levels (MCLs) under section 1412 of the Safe Drinking Water Act (SDWA), 42 U.S.C. 300g-1. EPA was concerned that this provision, in appearing to require the adoption of criteria equal to MCLs, restricted the State's authority to adopt criteria necessary to protect domestic water supplies for pollutants for which EPA has not published MCLs, even though EPA has published recommended water quality criteria under section 304(a) of the CWA for this purpose. A State regulation authorizing the State to adopt criteria only for pollutants for which EPA has promulgated MCLs is inconsistent with Federal regulations at 40 CFR 131.11(a), which requires that States adopt water quality criteria necessary to protect the designated uses. Such criteria ''must contain sufficient parameters or constituents to protect the designated use.'' K.A.R. 28–16–28e(c)(3)(C) appeared to restrict the State from meeting this requirement, and for that reason EPA disapproved the provision in 1998.

In response to EPA's 1998 action, KDHE clarified that this provision did not limit the State's authority to go beyond the MCLs when adopting water quality criteria for its domestic water supply. KDHE identified pollutants for which it had adopted numeric water quality criteria applicable to the domestic water supply use based on EPA's recommended section 304(a) criteria for those pollutants, even though EPA had not published MCLs for them under the SDWA. Although there continue to be gaps in domestic water

supply criteria for specific pollutants within the State's standards, EPA believes the State demonstrated that EPA's original interpretation of this provision was in error. As a result of the State's clarification that it has the authority to adopt water quality criteria applicable to its domestic water supply use under K.A.R. 28–16–28e(c)(3)(C) based on EPA's published section 304(a) criteria, EPA determined that this provision of the State's water quality standards is consistent with the CWA and EPA's implementing regulations. Therefore, in its January 19, 2000, letter, EPA withdrew its 1998 disapproval and approved the provision, thereby eliminating the need for a Federal promulgation.

E. EPA Review of Kansas' 1994 and 1999 Water Quality Criteria for Toxic Pollutants

a. 1994 Revisions to Kansas Water Quality Standards

In its 1994 revisions of its water quality standards, Kansas adopted numeric water quality criteria for many pollutants for which it previously had none. Kansas also revised existing single-value criteria to separately address both acute and chronic toxicity. In its 1998 action, EPA approved 89 separate water quality criteria for toxics for the protection of aquatic life and human health adopted by the State as fully consistent with the requirements of the CWA and EPA's implementing regulations. All of the State-adopted water quality criteria approved by EPA in 1998 were equal to or more stringent than those Federal criteria previously promulgated by EPA for Kansas under the NTR in 1992. (*See* Enclosure B, Table B., February 19, 1998, letter from EPA to the Kansas Department of Health and Environment.) With that approval decision, the numeric water quality criteria that EPA had promulgated for Kansas for those pollutants as part of the NTR were no longer necessary. Therefore, EPA withdrew the Federal criteria (65 FR 19659, April 12, 2000).

EPA, in its 1998 action, also disapproved a number of water quality criteria for both aquatic life and human health protection that EPA determined did not protect the State's designated uses. Of the State-adopted criteria disapproved by EPA, a large number of the pollutants were already addressed by Federally-promulgated criteria in the NTR. Because the NTR criteria for these pollutants continue to apply in Kansas, no further action by EPA is necessary at this time. In its 1998 action, EPA also disapproved water quality criteria for pollutants that were not included in the 1992 NTR for Kansas. EPA identified these pollutants as candidates for future promulgation should the State fail to adopt water quality criteria which protect designated uses or to provide adequate scientific justification for not having them.

b. 1999 Revisions to the Kansas Water Quality Standards

On June 29, 1999, the State of Kansas completed another set of revisions to its water quality standards regulations and submitted them for EPA's review and approval on August 10, 1999. In that action, Kansas revised a number of its water quality criteria for both aquatic life and human health protection to address criteria previously disapproved by EPA in 1998. Many of those revised criteria were approved by EPA on January 19, 2000. Where the State adopted water quality criteria that are equal to or more stringent than the applicable Federal criteria promulgated for Kansas under the NTR, EPA withdrew the Federal criteria (65 FR 19659, April 12, 2000). EPA also approved water quality criteria adopted by the State in 1999 that were less stringent than those Federal criteria promulgated for Kansas in the NTR but that were consistent with the Clean Water Act. In a separate, upcoming action, EPA will propose to withdraw Kansas from the NTR for those pollutants.

In its 1999 revisions, Kansas also submitted water quality criteria for pollutants not included in the NTR for Kansas. Those revised criteria were intended to address criteria disapproved by EPA in its 1998 action. EPA approved the 1999 water quality criteria where EPA determined that they were based on scientifically defensible methods and protected designated uses. In its January 19, 2000, approval of Kansas' 1999 submission of revised water quality standards, EPA approved acute and chronic aquatic life quality criteria for nickel and zinc; acute aquatic life criteria for silver; human health criteria (water and organism) for thallium; and human health criteria (organism only) for alpha-and beta-endosulfan. The new or revised water quality criteria adopted by Kansas on June 29, 1999, and approved by EPA on January 19, 2000, address EPA's disapproval in its 1998 action. Therefore, no further action by EPA is necessary for those pollutants.

Several water quality criteria adopted by the State in 1994 and disapproved by EPA in 1998 were not corrected by the State in its 1999 revisions to its water quality standards. For those pollutants that are already subject to Federally promulgated water quality criteria, no further EPA action is necessary in response to the 1998 disapproval action because Kansas remains in the NTR for those pollutants. In many instances, the State withdrew its EPA-disapproved water quality criteria as part of its 1999 revisions and replaced State criteria with a footnote acknowledging there are Federal criteria in place. Because an acknowledgment of existing Federal water quality standards within Kansas regulations does not constitute actual adoption of water quality criteria by the State, EPA is leaving the existing Federal water quality standards in place.

c. EPA Withdrawal of 1998 Disapproval

In its 1998 review of the 1994 Kansas water quality standards revisions, EPA disapproved State water quality criteria for alpha-endosulfan and beta-endosulfan for the State's Domestic Water Supply use as being inconsistent with the requirements of the CWA and EPA's implementing regulations. This disapproval was procedurally in error however, because the State had not adopted any new or revised criteria for the Domestic Water Supply use for those pollutants in 1994 that would have triggered EPA's approval or disapproval authority.

d. Water Quality Criteria for Endrin

In 1994, the State adopted a new criterion for endrin for its Domestic Water Supply use, which EPA disapproved in its 1998 action under section 303(c)(3). In its 1999 revision, the State removed the numeric criterion for endrin altogether. EPA subsequently found that its 1998 disapproval of the numeric criterion for endrin had been in error. The State's 1994 criterion was consistent with the CWA and was based on the drinking water MCL for endrin (and no Kansas NTR value for endrin had been promulgated). Therefore, on January 19, 2000, EPA withdrew its 1998 disapproval of Kansas's 1994 endrin criterion and disapproved the State's 1999 deletion of the endrin criterion. EPA disapproved this deletion because it had the effect of leaving the State with no criterion for endrin in its Domestic Water Supply use. If the State fails to address this deficiency, EPA will propose water quality criteria for endrin, in a separate action, at the same time it addresses the other provisions EPA disapproved on January 19, 2000.

F. Antidegradation and Water Quality Standards Implementation Procedures

As part of the Kansas' 1994 submission, KDHE submitted procedures for the implementation of its

standards through the development of NPDES permit limitations (*Kansas Surface Water Quality Implementation Procedures*; October, 18, 1994). These procedures contain two separate components: procedures for implementing the State's antidegradation policy at K.A.R. 28–16–28c(a), and procedures governing the implementation of water quality standards, *e.g.,* through development of water quality-based effluent limitations for NPDES permits.

In its 1998 action, EPA addressed components of these procedures separately based on their distinctly different treatment under Federal regulations. Federal regulations at 40 CFR 131.12(a) require that States identify methods for implementing the State's antidegradation policy. Development of these implementation procedures is not discretionary. Section 3 of the State's procedures addressed implementation of the State's antidegradation policy. In its 1998 disapproval of Kansas' October 18, 1994, antidegradation implementation procedures, EPA identified three deficiencies with the procedures that would lead to the implementation of Kansas' antidegradation policy in a manner inconsistent with Federal regulations. These deficiencies were: (1) Failure to maintain existing *water quality* for Tier 3 waters; (2) Failure to maintain existing water quality for Tier 2 waters under the State's antidegradation provision; and (3) Failure to identify the means by which the State would implement its antidegradation policy in the context of determining whether to allow a lowering of surface water quality by point sources of pollution where nonpoint sources also contribute the pollutant of concern to that body of water. The State revised it's antidegradation procedures and submitted them to EPA for review in 1999. These revised procedures addressed the first two disapproved items regarding existing water quality in Tier 3 and Tier 2 waters, but not the third disapproved item. This last item remains disapproved and is addressed in section IV.D.

The 1994 antidegradation procedures required the protection of existing water quality within the State's Outstanding Natural Resource Waters, but did not describe the mechanisms or methods by which that level of protection was to be implemented. Specifically, the Procedures failed to identify how existing water quality in the State's Outstanding Natural Resource Waters would be maintained under the mixing zone provisions at K.A.R. 28–16–28c(b)(2). The use of mixing zones and zones of initial dilution in the State's Outstanding Natural Resource Waters allowed for the permanent lowering of existing water quality in portions of those waters.

The State's 1994 Procedures also did not adequately protect high quality waters as required under Federal regulations at 40 CFR 131.12(a)(2) (referred to as ''Tier 2'') and the State provision at K.A.R. 28–16–28c(a)(2). The Tier 2 level of protection under the Federal antidegradation regulations and the State antidegradation policy requires protection of existing *water quality* unless a lowering of water quality is necessary to accommodate important social or economic development in the area where the lowering of existing water quality occurs. However, the State procedure only addressed the protection of existing and designated *uses* in regulating point sources of pollution rather than existing water quality. This is contrary to the State provision at K.A.R. 28–16–28c(a)(2) and is also inconsistent with 40 CFR 131.12(a)(2).

As part of its June 29, 1999, revisions to its water quality standards, the State revised its antidegradation implementation procedures in a manner consistent with revisions to the State's antidegradation policy (see section III.A.) to maintain existing water quality in Tier 3 waters. Kansas' 1999 revision of its antidegradation implementation procedures also adequately addressed the manner in which the maintenance of existing water quality is ensured for high quality waters (Tier 2). EPA approved these revisions in its January 19, 2000, letter. These corrections to the State's Procedures made further Federal action to address these two disapproved provisions unnecessary.

The remaining provisions of the State's 1994 implementation procedures addressed implementation of water quality standards. Federal regulations at 40 CFR 131.13 address policies generally affecting the application and implementation of standards that States may adopt, at their discretion. If a State adopts such policies, the regulation provides that they are subject to EPA review and approval. In its 1998 action, EPA disapproved the State's implementation procedures for NPDES permits because the procedures did not ensure that permits would derive from and comply with the State's water quality standards. Specifically, EPA identified the following deficiencies. First, the procedures failed to clearly identify how mixing zones were to be limited or sized. Second, the procedures addressing whole effluent toxicity (WET) testing allowed the use of less sensitive organisms than recommended in the testing methodology and did not identify any circumstances when WET limitations would be placed in NPDES permits when there was reasonable potential to violate the State's narrative water quality criteria. Third, the procedures specified a ''lesser level of evaluation'' for minor permits than is specified for major permits. Finally, the procedures did not include provisions addressing site-specific water quality criteria development, the issuance of variances or the manner by which the State would measure and evaluate socio-economic impacts.

In its 1999 revisions to its water quality standards, Kansas significantly revised its implementation procedures (*Kansas Implementation Procedures: Surface Water*, June 1, 1999) and corrected the deficiencies identified in EPA's 1998 disapproval letter. Additionally, the State incorporated its implementation procedures into the State's water quality regulations at K.A.R. 28–16–28b(cc). These revised implementation procedures, to the extent they addressed water quality standards implementation, were reviewed by EPA and approved on January 19, 2000.

IV. What Federal Water Quality Standards Is EPA Proposing in Response to Its 1998 Disapproval?

A. Designated Uses

1. Background

Section 101(a)(2) of the CWA establishes as a national goal ''water quality which provides for the protection and propagation of fish, shellfish, and wildlife and * * * recreation in and on the water,'' wherever attainable. This national goal is commonly referred to as the ''fishable/swimmable'' goal of the CWA. (Hereafter, the fishable/swimmable goals are referred to as CWA section 101(a) goal uses.) Section 303(c)(2)(A) requires State water quality standards to ''protect the public health and welfare, enhance the quality of water, and serve the purposes of this Act.'' EPA's regulations at 40 CFR part 131 interpret and implement these CWA provisions by requiring that water quality standards provide for CWA section 101(a) goal uses unless those uses have been shown to be unattainable, effectively creating a rebuttable presumption of attainability, *i.e.,* a default designation of CWA section 101(a) goal uses should apply. The mechanism in EPA's regulations used to rebut this presumption is a use attainability analysis.

Under 40 CFR 131.10(j), States are required to conduct a use attainability analysis (UAA) whenever the State designates or has designated uses that do not include the CWA section 101(a) goal uses, or when the State wishes to remove CWA section 101(a) goal uses, or when it adopts subcategories of uses that require less stringent criteria. Uses are considered by EPA to be attainable, at a minimum, if the uses can be achieved (1) when effluent limitations under section 301(b)(1)(A) and (B) and section 306 are imposed on point source dischargers, and (2) when cost effective and reasonable best management practices are imposed on nonpoint source dischargers. See 40 CFR 131.10(d). EPA's regulations at 40 CFR 131.10 list grounds upon which to base a finding that attaining the designated use is not feasible, as long as the designated use is not an existing use. A UAA is defined in 40 CFR 131.3(g) as a ''structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors.'' In a UAA, the physical, chemical and biological factors affecting the attainment of a use are evaluated through a water body survey and assessment. Guidance on water body survey and assessment techniques is contained in the Technical Support Manual, Volumes I–III: Water Body Surveys and Assessments for Conducting Use Attainability Analyses. Volume I provides information on water bodies in general, Volume II contains information on estuarine systems and Volume III contains information on lake systems. (Volumes I–II, November 1983; Volume III, November 1984). Additional guidance is provided in the Water Quality Standards Handbook: Second Edition (EPA–823–B–94–005, August 1994). Guidance on economic factors affecting the attainment of a use is contained in the Interim Economic Guidance for Water Quality Standards: Workbook (EPA–823–B–95–002, March 1995).

As discussed earlier, EPA regulations effectively establish a ''rebuttable presumption'' that CWA section 101(a) goal uses are attainable and therefore should apply to a water body unless it is affirmatively demonstrated that such uses are not attainable. EPA adopted this approach in order to help achieve the national goal articulated by Congress that, ''wherever attainable,'' water quality should provide for the ''protection and propagation of fish, shellfish and wildlife'' and for ''recreation in and on the water.'' CWA 101(a). While facilitating achievement of Congress' goals, the ''rebuttable presumption'' approach preserves States' paramount role in establishing water quality standards in weighing any available evidence regarding the attainable uses of a particular water body. The rebuttable presumption approach does not restrict the discretion that States have to determine that CWA section 101(a) goal uses are not, in fact, attainable in a particular case. Rather, if the water quality goals articulated by Congress are not to be met in a particular water body, the regulations simply require that such a determination be based upon a credible, ''structured scientific assessment'' of use attainability. See 40 CFR 131.3(g) (defining use attainability analysis).

EPA believes that the rebuttable presumption policy reflected in these regulations is an essential foundation for effective implementation of the CWA as a whole. The ''use'' of a water body is the most fundamental articulation of its role in the aquatic and human environments, and all of the water quality protections established by the CWA follow from the water's designated use. If a use lower than a CWA section 101(a) goal use is designated based on inadequate information or superficial analysis, water quality-based protections that might have enabled the water to achieve the goals articulated by Congress in section 101(a) may not be put in place. As a result, the true potential of the water body may never be realized, and a resource highly valued by Congress and the public may be forever lost.

EPA seeks, through its oversight under section 303(c) of the Act, to ensure that any State's decision to forgo protection of a water body's potential to support CWA section 101(a) goal uses results from an appropriately ''structured'' analysis of use attainment. Where EPA concludes that the State failed to adequately justify a use designation lower than a CWA section 101(a) goal use designation, EPA disapproves the use designation. In some cases, the State may decide to revise its use classifications to protect CWA section 101(a) goal uses. In other cases, the State may decide to conduct a more thorough analysis of use attainability sufficient to rebut the rebuttable presumption reflected in the regulations. Where, however, a State does neither, federally promulgated CWA section 101(a) goal uses will ensure the water quality goals of the Act are effectively implemented.

2. EPA Review of Kansas' Use Designations

When Kansas submitted its revised standards to EPA on October 31, 1994, it also submitted the *Kansas Surface Water Register,* which contains the listing of all streams, lakes and wetlands classified under the State's water quality standards, individual water body locational data and all designated uses for each stream segment, wetland and lake. The *Register,* adopted by reference at K.A.R. 28–16–28d(c)(2), greatly expanded the number of streams previously designated under the 1985 Kansas standards, dividing each original stream segment into multiple parts, with independent designations for each newly identified segment. Given both the extensive restructuring of the citations for classified stream segments and the creation of the *Register* separate from the K.A.R., EPA treated all of the 1994 use designations as new or revised water quality standards subject to EPA approval under section 303(c)(3) of the CWA. In the 1994 revision to Kansas' water quality standards, the State listed a number of streams and lakes that it determined did not support a primary contact recreation use or aquatic life protection use, or that were simply undesignated because Kansas reported that it had limited or no field information to make a CWA section 101(a) goal use designation. In 1998, of these waters, EPA disapproved nine water body designations because it determined that the use attainability analyses submitted by Kansas were inadequate, and it disapproved one water body designation for which the State failed to submit a use attainability analysis to justify the omission of the CWA section 101(a) goal uses. EPA also disapproved Kansas' failure to designate any uses at all for another 1,475 waters.

Since the early 1980's, EPA has identified the State's lack of justification for waters not designated with section 101(a) goal uses, particularly primary contact recreation, as a significant issue that must be addressed. EPA approved the 1985 revisions to the Kansas water quality standards on June 19, 1986, based on ''completion of the statewide use attainability analyses in accordance with the KDHE schedule submitted to EPA, dated May 2, 1986.'' These analyses were to address all surface waters that the State did not designate for primary contact recreational use. The schedule of planned use attainability analyses submitted by KDHE and accepted by EPA provided for completion of this task by 1991. Kansas has performed a number of use attainability analyses since the adoption

of the 1994 Water Quality Standards. As part of its 1998 approval action, EPA approved over 300 revised use designations as a result of those use attainability analyses that were submitted. However, Kansas did not include supporting use attainability analyses for all the surface waters that the State did not designate for primary contact recreation. EPA therefore disapproved those use designations as being inconsistent with 40 CFR 131.10(g).

3. EPA Proposal To Promulgate Federal Designated Uses for Specific Stream Segments and Lakes

Subsequently, in 1999, Kansas adopted, and submitted to EPA, use designations consistent with the CWA and EPA's implementing regulations for two streams and 14 lakes for which EPA had previously disapproved use designations. On January 19, 2000, EPA approved these revised use designations. Kansas also identified in its 1999 submittal, and EPA approved on January 19, 2000, the deletion of seven water bodies due to errors in their original identification. EPA also identified, in its January 2000 letter, one stream segment in Kansas that is located totally within Indian country, over which Kansas has not demonstrated jurisdiction for CWA purposes. In preparing today's proposed rulemaking, EPA also identified four waterbodies the Agency inadvertently counted twice in its 1998 disapproval action. Accordingly, in today's action, EPA is proposing to promulgate primary contact use designations for 1,456 stream segments and lakes and the State's expected aquatic life use designation for one stream segment.

When proposing replacement Federal water quality standards, EPA must follow the same rebuttable presumption approach that applies under the regulation to State decision-making (40 CFR 131.22). EPA does not believe it would be appropriate to alter the current approach to establishing use designations under 40 CFR part 131 merely because the forum for decision-making has changed from the State to the Federal level. Attaining the goals articulated by Congress is no less important when EPA, as opposed to a State, is making use designation determinations. Moreover, EPA believes that failure to apply the rebuttable presumption in the Federal context could undermine how that presumption currently applies to State decision-making under the Federal regulations. If the presumption did not apply equally in the State and Federal decision-making process, a State could effectively shift the burden of demonstrating attainability simply by failing to adequately justify its use designation and thereby triggering a Federal rulemaking proceeding.

EPA's approach in this proposed rulemaking does not undermine the State's primary role in designating uses for waters in Kansas. If, prior to EPA finalizing this rule, the State undertakes a sound analysis of use attainability for the waters subject to this proposal that takes into account appropriate biological, chemical and physical factors, and concludes that the CWA section 101(a) goal uses are not attainable for these waters, EPA would approve the State's action and would not promulgate CWA section 101(a) goal use designations for those waters. EPA is soliciting public comment and information on the attainability of the proposed Federal uses for the water bodies listed in proposed 40 CFR 131.34 (g) and (h). EPA also encourages the State to continue evaluating the appropriate use designations for these waters. The State of Kansas has performed a number of use attainability analyses (UAAs) since the adoption of the 1994 Water Quality Standards. As part of the 1998 approval action, EPA approved over 300 revised use designations as a result of those UAAs submitted to EPA. As part of the State's commitment to review uses, Kansas is updating and standardizing the protocols for performing UAAs through a public process. Four public forums were held by the State to present the revised UAA protocols to the public. Improvements to the State's methods of performing use attainability analyses also implements recommendations made by the Kansas Special Commission of Water Quality Standards. Kansas expects to complete this process in the Summer of 2000. EPA will review any future UAAs submitted by the State with the same level of rigor as it has reviewed previous UAAs submitted by the State. EPA's proposal of designated uses based on the rebuttable presumption does not affect the substance of EPA's review of State UAAs. If further data indicates that this presumption is not appropriate for particular water bodies, EPA's final rule will be revised accordingly. In particular, if EPA determines, based on the record, that any of Kansas' designations are justified, there will be no need for Federally promulgated use designations for those particular water bodies. EPA believes that this approach is reasonable because it is consistent with the goals in section 101(a)(2) of the CWA and the implementing regulations at 40 CFR part 131.

Kansas' use classification system includes a variety of designated uses for its waters, including ''domestic water supply,'' ''agricultural water supply,'' ''special aquatic life,'' ''expected aquatic life,'' ''restricted aquatic life,'' ''primary contact recreation,'' and ''food procurement.'' Kansas water quality standards identify three subcategories of aquatic life uses for Kansas' surface waters: Special aquatic life use waters, expected aquatic life use waters, and restricted aquatic life use waters. The Kansas water quality standards define ''expected aquatic life use waters'' as ''surface waters containing habitat types and indigenous biota commonly found or expected in the State.'' Further, the Kansas Surface Water Register includes the expected aquatic life use designation for the majority of surface waters in the State. EPA's approach in proposing designated uses for 1,457 of the water bodies is to select uses from Kansas' system that correspond to CWA section 101(a) goal uses. This approach meets the requirements of the CWA while deferring to the State's approach for defining 101(a) goal uses.

a. Expected Aquatic Life

EPA is proposing to promulgate an aquatic life use designation for one stream segment, Whiskey Creek, that the State designated for a restricted aquatic life use in 1994 without a supporting UAA. Subsequently, the State submitted a UAA documenting its designation decision for Whiskey Creek on December 23, 1997. The basis for this designation was the State's determination that poor water quality, associated with the discharge from a wastewater treatment facility, limited the attainment of an expected aquatic life use. The State's determination was not consistent with Federal regulations at 40 CFR 131.10, which require that at least one of six reasons be met to justify uses less than CWA section 101(a) uses or downgrades in designated uses. The reason supplied by Kansas was not one of the six possible bases specified in the regulation. Therefore, EPA disapproved Kansas' use designation for Whiskey Creek in 1998.

Because the State assigns the expected aquatic life use category to a majority of its surface waters, and there is no information to indicate that Whiskey Creek contains other than common habitat types and indigenous biota, EPA believes that an expected aquatic life use designation is appropriate for aquatic life in Whiskey Creek. Therefore, EPA proposes to designate Whiskey Creek for expected aquatic life.

This water is identified in proposed 131.34 (g).

b. Primary Contact Recreation

EPA is proposing to promulgate primary contact recreation use designations for 1,456 waters in Kansas. In its 1998 action, EPA disapproved the absence of a primary contact recreation use designation for 1,484 water bodies. Of these waters, EPA disapproved nine water bodies' use designations because of inadequate use attainability analyses. For the remainder, which under Kansas' water quality standards received default protection for secondary contact recreational use, see K.A.R. 28–16–28d(c)(1), the State provided no documentation regarding the absence of a primary contact recreation use. Therefore, EPA proposes to promulgate primary contact recreation use designations for 1,456 waters in Kansas. These waters are identified in proposed 40 CFR 131.34(h).

The designation of primary contact recreation uses in this proposed rule is not intended to apply to waters within Indian country. The 1999 *Kansas Surface Water Register* includes some stream segments that may be located wholly or partly in Indian country. EPA approval of designated uses for waters in Kansas has never been intended to apply to any waters located within Indian country because EPA has not analyzed or approved the State's authority to adopt water quality standards for waters in Indian country. In its January 19, 2000, letter, EPA recommended that the State clarify this matter by amending the Kansas Surface Water Register to specify that the State's water quality standards do not apply to any portions of waters located in Indian country. EPA is working with Tribes in Region VII to identify those Tribes that may consider seeking authorization to administer the water quality standards program under the CWA. That effort is part of a national effort to ensure there are water quality standards for Indian Country waters.

4. Request for Comment and Data

EPA believes the proposed designated uses in today's rule are appropriate considering the requirements of the CWA and EPA's implementing regulations and the absence of data and information supporting the State's designation of less stringent uses. EPA solicits any additional data and information that may further support or refute the attainability of today's proposed designated uses. The Agency will evaluate any data and information submitted to EPA by the close of the public comment period with regard to designating uses for these 1,457 stream segments and lakes. After full consideration of such information, EPA will make a final decision whether the designated uses in today's proposal are appropriate. To assist commenters, the following paragraphs provide guidance on the type of information EPA considers to be most important.

EPA is seeking information that would assist in determining for each of the waters identified in proposed 40 CFR 131.34(g) and (h) whether the proposed designated uses are currently being attained or have been attained since November 28, 1975; whether natural conditions or features or human-caused conditions prevent the attainment of these uses and whether these conditions can or cannot be remedied or would cause more environmental damage to correct than to leave in place; and whether controls more stringent than those required by sections 301(b) and 306 of the CWA would be needed to attain the uses, and, if imposed, whether they would result in substantial and widespread social and economic impact to the community. A general discussion of the types of data/information requested by the Agency follows.

Ambient Monitoring Information: (1) Any in-stream data for any of the stream segments listed in 40 CFR 131.34 (g) and (h) reflecting either natural conditions (*e.g.,* in-stream flow data or other data relating to stream hydrology) or irretrievable human-caused conditions that cannot be remedied and that prevent the uses or water quality criteria from being attained; (2) any available in-stream biological data; (3) any chemical and biological monitoring data that verify improvements to water quality as a result of treatment plant/facility upgrades and/or expansions; and (4) any in-stream data reflecting nonpoint sources of pollution or best management practices that have been implemented for nonpoint source control.

Current and Historical Effluent Data: (1) Any data and information relating to mass loadings from point source discharges of pollutants such as BOD, NH_3 -N, chlorine, metals (*e.g.,* arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, zinc), other toxics (*e.g.,* volatile organic chemicals such as benzene or toluene, acid extractables such as pentachlorophenol, base neutrals such as anthracene, fluorine or pyrene, and pesticides such as aldrin, lindane, DDT, dieldrin, endrin and toxaphene); (2) data and information related to facility or treatment plant effluent quality; and (3) any information related to releases of pollutants from other sources such as landfills, transportation facilities, construction sites, agriculture/silviculture, incinerators, and contaminated sediments.

Water Quality Modeling Information: (1) Any data or information on analytical models that can be used to evaluate or predict stream quality, flow, morphology; (2) any physical, biological or chemical characteristics relating to designated uses; and (3) the results of any such models that can be used to evaluate the attainment of designated uses.

Economic Data: any information relating to costs and benefits associated with or incurred as a result of facility or treatment plant expansions or upgrades. This information includes: (1) Qualitative descriptions or quantitative estimates of any costs and benefits associated with facility or treatment plant expansions or upgrades, or associated with facilities or treatment plants meeting limits; (2) any information on costs to households in the community with facility or treatment plant expansions or upgrades, whether through an increase in user fees, an increase in taxes, or a combination of both; (3) descriptions of the geographical area affected; (4) any changes in median household income, employment, and overall net debt as a percent of full market value of taxable property; and (5) any effects of changes in tax revenues if the private-sector entity were to go out of business, including changes in income to the community if workers lose their jobs, and effects on other businesses both directly and indirectly influenced by the continued operation of the private sector entity.

B. Stream Design Flow

1. Background

The 1985 Kansas water quality standards at K.A.R. 28–16–28c(c)(1) specified conditions for the application of numeric water quality criteria to State waters, including stream flows below which numeric criteria did not apply (*i.e.,* the 7Q10 or 1 cubic foot per second (cfs)). The 1985 provisions at K.A.R. 28–16–28c(b), describing the allocation of dilution for discharges to classified streams based on the use of mixing zones, did not specify a stream design flow. Revisions to the 1985 Kansas water quality standards at K.A.R. 28–16–28c(c)(1) in 1994 introduced a stream design flow of an ''assumed 7Q10'' in addition to a ''measured 7Q10,'' defining the stream flow below which numeric criteria do not apply. Under the 1994 revisions, an ''assumed 7Q10'' of either 1 cfs or 0.1 cfs

(depending upon the particular aquatic life use designation of that stream segment) would serve as the low flow cut-off if the ''measured 7Q10'' was below one of those values. Exceptional State waters and special aquatic life use waters are afforded 0.1 cfs for assumed dilution, whereas expected aquatic life use waters and restricted aquatic life use waters are afforded 1 cfs for assumed dilution. In its 1994 revisions to the mixing zone provisions at K.A.R. 28–16–28c(b), the State also explicitly included the concept of either the ''measured 7Q10'' or the ''assumed 7Q10'' flow in its calculation of the mixing zone cross-sectional area and, therefore, the dilution available to meet the applicable criteria. In disapproving these provisions in 1998, EPA pointed out that implementation of this provision could authorize water quality based effluent limits (WQBELs) that would cause exceedences of numeric water quality criteria beyond the mixing zone and would fail to protect the designated uses of the water body.

For example, under K.A.R. 28–16–28e(c)(2)(F), the State applies its acute and chronic numeric water quality criteria for protecting aquatic life outside the zone of initial dilution and beyond the mixing zone, respectively. In this manner, toxicity within the waters of the State is prevented. Under other provisions at K.A.R. 28–16–28e(c)(4) and (7), State standards specify numeric criteria for protecting food procurement and recreational uses, respectively, beyond the mixing zone. K.A.R. 28–16–28c(b) specifies the dimension of the allowed mixing zone based on the designated use of the water body and the ratio of the receiving stream 7Q10 flow to the discharge design flow. In the calculation of the specific mixing zone cross-sectional area or volumetric flow, the State standards regulation provides for the use of either the 7Q10 flow or an assumed flow.

Reliance on an ''assumed flow'' provides for dilution which does not exist and will result in the criteria being exceeded more often than once in three years as specified in the State's numeric criteria for chronic protection. The 1999 State standards at K.A.R. 28–16–28b(lll) implement the acute aquatic life criteria by defining the size or volume of the allowed zone of initial dilution in terms of the allowed mixing zone (i.e., no more than 10% of the mixing zone). Calculating a mixing zone cross-sectional area that allows for an assumed flow is not scientifically defensible because it relies on flow that, at times, does not exist. EPA recommends a 1B3 or 1Q10 design flow for acute aquatic life protection, and harmonic mean flow for human health protection including recreational uses. EPA believes that the State's use of a 7Q10 design flow for implementation of human health is protective of the corresponding designated uses. Therefore, EPA is only proposing to promulgate design flows for the protection of acute and chronic aquatic life.

In August 1999, KDHE submitted water quality standards revisions for EPA review and approval that included revisions to K.A.R. 28–16–28c(b)(2)(D) and (c)(1). These new or revised provisions were relocated to K.A.R. 28–16–28c(b)(7) and (b)(8), subsection (A) through (D) without being substantially revised. The provisions disapproved by EPA in its 1998 action regarding assumed low flow remained. In EPA's January 19, 2000, approval/disapproval letter, EPA informed the State that the revised provisions at K.A.R. 28–16–28c(b)(7) and (b)(8) remain disapproved consistent with EPA's 1998 disapproval decision.

2. EPA Review of Kansas' Assumed Flow Provision

Kansas' water quality criteria are derived from EPA's recommended 304(a) water quality criteria which are designed around specific assumptions regarding magnitude of exposure, duration of exposure and the frequency these parameters may be exceeded and still protect the designated use. These parameters are based on the toxicological studies supporting the criteria. These toxicological assumptions are matched to biologically-based stream design flows to ensure that the probabilities of occurrence for both pollutant concentrations and stream flow are protective of aquatic life. Simply put, the water quality criteria relied upon to protect designated uses are inseparable from the stream design flow assumptions through which they are implemented. EPA guidance in the 1994 Water Quality Standards Handbook and the 1991 Technical Support Document for Water Quality-based Toxics Control identify the stream flows that match the aquatic life criterion continuous concentration (CCC, or chronic criteria) and the criterion maximum concentration (CMC, or acute criteria) as the biologically-based 4B3 and 1B3, respectively. These statistically derived flows match the averaging periods and recurrence frequency specified in the State's water quality criteria. Although EPA recommends the use of biologically-based flows in implementing water quality criteria, there are alternative approaches. Most States routinely rely on hydrologically-based flows derived using the Log Pearson 3 method generated by the U.S. Geological Survey, to implement water quality criteria. EPA guidance evaluated the compatibility of using ''extreme value statistic flows'' (*e.g.,* 7Q10) for the implementation of water quality criteria for the protection of aquatic life (*Technical Guidance Manual for Performing Waste Load Allocations, Book VI, Design Conditions:* Chapter 1—Stream Design Flow for Steady-state Modeling. August 1986). EPA determined that, for most waters and in most instances, the use of 7Q10 and 1Q10 hydrologically-based stream design flows for the implementation of chronic and acute water quality criteria, respectively, provides a level of protection commensurate with EPA's recommended biologically-based flows. That is, 7Q10 equates to the 4B3 and 1Q10 equates to the 1B3. States may select other design flows based on a demonstration that such alternative flows are protective of the specified designated uses. Also, States are encouraged to use dynamic modeling as a scientifically defensible alternative to extreme flow statistics.

Many Kansas streams possess 7Q10 flows of zero, particularly western streams that are already stressed by excessive surface and ground water withdrawals. Small, low flow headwater streams that serve as critical habitat for many threatened and endangered aquatic species may receive toxic loadings of pollutants as a result of the implementation of this provision because discharge limits would be based on flow that is not there. K.A.R. 28–16–28d(b)(1) applied water quality standards to those streams with mean summer base flows exceeding 0.1 cfs and those with less flow but with adequate pooling that serve as refuge for aquatic life during intermittent flow. Base flow is specifically defined in State standards to include sources of flow other than precipitation or ground water (*e.g.,* effluent discharge and irrigation return flow). Many streams classified for designated uses under this provision (*i.e.,* streams with mean summer base flows greater than 0.1 cfs) nevertheless have 7Q10 flows of less than 1 or 0.1 cfs. In such instances, Kansas' standards allow a classified stream to receive discharges that rely on dilution to comply with State standards, even though the dilution does not exist. This will result in ambient pollutant concentration exceeding the criteria value more often than once every three years as specified in the State's numeric aquatic life criteria.

EPA expects that the scientific defensibility of alternate flows would be dependent upon pollutant-specific or site-specific circumstances such as watershed size and characteristic hydrography. EPA believes that Kansas' implementation of these assumed flows is not scientifically defensible or protective of the State's designated aquatic life use, as required by the Clean Water Act and EPA's implementing regulations.

KDHE has not provided any scientific rationale for the use of assumed flows or provided any data suggesting that this provision will sufficiently protect the designated aquatic life uses. EPA's regulations at 40 CFR 131.21(a)(2) require that new or revised standards be accompanied by supporting analyses. KDHE noted in its *''Response to Comments Concerning Proposed K.A.R.''s 28–16–28 b through f''* (June 23, 1994) that default low flows are employed in other States, that they are necessary because of the paucity of flow data in small watersheds, and that some form of this provision has been employed by Kansas for twenty years. Although these are valid points, they are not compelling reasons to approve State provisions that do not ensure the protection of the designated uses of Kansas' surface waters. As EPA's 1994 Water Quality Standards Handbook (EPA–823–B–94–005a) specifically states, ''[The fact that] many streams within a state have no flow at 7Q10 is *not* adequate justification for designating alternative flows.'' Because Kansas failed to adequately justify its alternative stream flow provisions, EPA, in its 1998 action, disapproved the standards provisions under K.A.R. 28–16–28c(b)(2)(D) and (c)(1) that reference assumed flows.

The State, in a February 26, 1999, letter to EPA and in its draft 1999 implementation procedures, noted that the primary purpose of the alternate flow approach is to provide economic relief for ''small communities [that] will face costly upgrades or construction of completely new treatment systems if permit limits are made more stringent.'' KDHE further stated in the letter to EPA that ''[T]he environmental benefit is small compared to the large and widespread costs associated with the removal of the minimum default flows.'' Although these potential impacts are of concern, the CWA and EPA's implementing regulations do not allow considerations of costs and benefits in establishing water quality criteria (design flows are a component of the criteria). Under Federal regulations, economic impacts associated with standards should be taken into account when assessing the attainability of designated uses and granting temporary variances to water quality standards. 40 CFR 131.10(g). It is permissible for the State to grant individual variances or to downgrade a designated use for a specific water body relying on economic data, but relying on dilution that is not available to violate the State's numeric criteria is not scientifically defensible. In section V, EPA discusses its analysis of the potential economic impacts associated with today's proposed standards.

3. EPA Proposal To Promulgate Stream Design Flows

In today's action, EPA is proposing the 7Q10 or 4B3 stream design flows for the implementation of chronic aquatic life criteria in Kansas. Additionally, EPA is proposing the 1Q10 or 1B3 design flow for the implementation of acute aquatic life criteria in Kansas. Kansas may submit to EPA alternate low flows for implementing criteria. Such alternative flows must be scientifically defensible, protective of the designated use, and approved by EPA before they can be used by the State.

4. Request for Comment and Data

EPA solicits any additional data and information that may further support or refute the attainability of the changes being proposed today. The Agency will evaluate any data and information submitted to EPA by the close of the public comment period. EPA will consider all available information and make a final decision on the appropriateness of today's proposed changes.

C. Effluent-Created Habitat

1. Background

Another regulation submitted to EPA by Kansas in 1994, K.A.R. 28–16–28c(c)(3), addressed those streams where designated uses are not attainable because of inadequate stream flow. Under the State's provision, if continuous flow in a stream is sustained primarily through the discharge of treated effluent, and all designated uses are otherwise unattainable due to low or nonexisting flow, then the discharger shall not be required to provide treatment beyond that required by technology-based effluent limitations imposed under Federal law. That exemption would not apply, however, if the resulting effluent would result in violations of the State's narrative water quality criteria or in an impairment of any of the existing or designated uses of a downstream classified surface water segment. In other words, this provision exempts dischargers from having to meet water quality-based effluent limitations derived from numeric water quality criteria adopted to protect the designated uses.

2. EPA Review of Kansas' Effluent-Created Habitat Provision

Implementation of K.A.R. 28–16–28c(c)(3) would result in State NPDES permits that cause or contribute to excursions above State water quality standards (*i.e.,* numeric criteria) prohibited by 40 CFR 122.44(d). Further, this reduced level of protection achieved through the NPDES permit is in effect a lowering of the designated use based on the State's determination that stream flow was inadequate. Not only has the State failed to submit a UAA to justify the implicit use downgrade, but, if Kansas had done so, such an approach would clearly be inconsistent with 40 CFR 131.10(g)(2). EPA's regulation specifically prohibits the removal or down-grading of a designated use based on inadequate flow where ''* * * these conditions may be compensated for by the discharge of sufficient volume of effluent discharges * * *to enable uses to be met.'' 40 CFR 131.10(g)(2).

EPA previously informed the State of the basis for its position in letters dated May 13, 1993, to Dr. Hammerschmidt, Deputy Director, Division of Environment, KDHE, and May 24, 1994, to Mark Bradbury, District Environmental Administrator, KDHE, which were entered into the record at the public hearings held by KDHE during its standards adoption. EPA disapproved this provision in its 1998 action. In its disapproval letter to the State, EPA stated that this deficiency could be remedied by deleting the provision or by revising K.A.R. 28–16–28c(c)(3) to require that, prior to a removal of a designated use, a showing be made as to whether attaining the designated use is not feasible consistent with the provisions at 40 CFR 131.10(g).

In 1999, the State of Kansas adopted subsequent revisions to its water quality standards, including revisions to K.A.R. 28–16–28c(c)(3). Those revisions recognize the need for the State to conduct a use attainability analysis to support any downgrade in use and acknowledge that any new or revised use would need to be adopted as part of the State's water quality standards.

However, in oral communications with EPA staff, KDHE staff informed EPA that the 1999 revisions also authorize NPDES permit limitations to be based on the use attainability analysis even before the corresponding revised use designations are adopted by

the State into their water quality standards. That is inconsistent with the current EPA regulations. In effect, Kansas is removing a designated use upon completion of a UAA but prior to following the public process for water quality standards revisions. 40 CFR 131.20(b). Furthermore, under recently promulgated regulations at 65 FR 24641 (April 27, 2000), revisions to State water quality standards will not be effective for the purposes of the CWA until approved by EPA. Therefore, a use attainability analysis contemplated under the provisions of the 1999 revisions cannot serve as a basis for NPDES permit limitations until the State adopts the corresponding use designation revision, submits it to EPA, and obtains EPA approval. K.A.R. 28–16–28c(c)(3), in effect, would allow permitting authorities to calculate limitations based on the results of a use attainability analysis irrespective of the outlined process. For that reason, the 1999 Kansas revisions are inconsistent with EPA's implementing regulations and do not address the deficiencies identified in EPAs 1998 disapproval letter with respect to the State's earlier version of that section. Therefore, the 1999 Kansas revisions to this provision do not eliminate the need for a Federal promulgation.

3. Ensuring Discharges to Effluent-Created Habitat Waters Protect the Designated Use

EPA is proposing to promulgate a provision requiring that designated uses at K.A.R. 28–16–28d and K.A.R. 28–16–28e for stream segments for which continuous flow is sustained primarily through the discharge of treated effluent must be protected (irrespective of the development of a use attainability analysis that demonstrates that a different use may be appropriate) until EPA approves a revision to the applicable use designation.

4. Request for Comment and Data

EPA solicits any additional data and information that may further support or refute the need for the changes being proposed today. The Agency will evaluate any data and information submitted to EPA by the close of the public comment period. After full consideration of such information, EPA will make a final decision on the appropriateness of the changes in today's proposal.

D. Procedures for Implementing the State's Antidegradation Policy

1. Background

In compliance with Federal regulations at 40 CFR 131.12(a), the State identified its methods for implementing the State's antidegradation policy and submitted these methods to EPA as part of the *Kansas Surface Water Quality Implementation Procedures* (October 18, 1994) on October 31, 1994. The *Kansas Surface Water Quality Implementation Procedures* (the Procedures) contained procedures the State uses to implement its antidegradation policy and develop water quality-based effluent limitations and conditions for NPDES permits. The portion of the Procedures addressing implementation of the State's antidegradation policy only addressed point sources of pollution. The State's Procedures were silent on implementing the antidegradation requirements of K.A.R. 28–16–28c(a)(2), in the context of determining whether to allow a lowering of surface water quality by point sources of pollution where nonpoint sources also contribute the pollutant of concern to that body of water. On August 10, 1999, the State submitted revised *Kansas Implementation Procedures: Surface Water* (June 1, 1999) to EPA for review and approval. The citation for the State antidegradation regulation changed from K.A.R. 28–16–12c(a)(2) to K.A.R. 28–16–28c(a)(1)(B) in the 1999 revisions.

2. EPA's Review of Kansas' Antidegradation Implementation Procedures

As part of its review of the 1994 submission of new or revised water quality standards from the State, EPA reviewed the portion of *Kansas Surface Water Quality Implementation Procedures* (October 18, 1994) addressing antidegradation, section 3, and found that the procedures did not fully address implementation of Kansas' antidegradation policy consistent with Federal regulations at 40 CFR 131.12(a). As discussed in section III. F., however, the State addressed all but one of the deficiencies in its 1999 submission, and EPA approved them in January 2000. Although revised in 1999, the State's antidegradation implementation procedures still did not identify how Kansas would implement the requirement in K.A.R. 28–16–28c(a)(1)(B) that all cost-effective and reasonable best management practices for nonpoint sources of pollution shall be achieved in instances when the KDHE allows a lowering of water quality by point sources. Accordingly, EPA's February 1998 disapproval remains in effect.

3. EPA Proposal To Promulgate Antidegradation Implementation Provisions for Kansas

Because of this continuing deficiency in Kansas' antidegradation implementation procedures, EPA is proposing to identify implementation procedures for use when applying K.A.R. 28–16–28c(a)(1)(B) to determine whether to allow a lowering of surface waters quality by point sources of pollution where nonpoint sources also contribute the pollutant of concern to that body of water. The proposed implementation procedures are described next.

Consistent with Federal regulations, Kansas' antidegradation policy at K.A.R. 28–16–28c(a)(1)(B) requires that, before allowing degradation of water quality in high quality waters from a point source, the highest statutory and regulatory requirements for all point sources, and all cost effective and reasonable BMPs for controlling nonpoint sources, are achieved. This requirement ensures that, before additional increments of water quality are used by point sources, nonpoint sources currently introducing the same pollutants into the water body are taking all reasonable steps required by State law to minimize the introduction of those pollutants. The implementation procedures proposed today are intended to facilitate the application of this requirement in Kansas' antidegradation regulation. These proposed procedures are based on guidance issued by EPA in 1994 entitled *Interpretation of Federal Antidegradation Regulatory Requirement,* from Tudor T. Davies, dated February 22, 1994. They consist of three steps to be undertaken when applying K.A.R. 28–16–28c(a)(1)(B) to determine whether to allow a lowering of surface water quality by point sources of pollution where non-pont sources also contribute the pollutant of concern. First, Kansas would need to identify significant sources (or categories) of nonpoint pollution that may impact a high quality water body by releasing the pollutants of concern. Second, Kansas would need to identify reasonable and cost-effective BMPs for each of these significant nonpoint sources or source categories. Third, Kansas would need to determine that significant nonpoint sources in those nonpoint source categories will implement the appropriate BMPs. In addition, EPA recommends conducting these analyses prospectively, on a watershed basis, to

facilitate antidegradation reviews of individual activities.

With respect to the first step, significant nonpoint source contributors can be identified through an analysis of all nonpoint source contributors in the area, or by an analysis of all nonpoint source contributors whose proximity to the water body, water body segment, or tributaries makes them ''significant'' in terms of potential water quality impact. Other factors such as the degree of uncertainty concerning cause-effect relationships can also be considered. Consistent with EPA's interpretation of its regulations, Kansas need only identify nonpoint source contributors for which the State has established requirements to implement control programs, but Kansas may also choose to identify other significant nonpoint source contributors that are not subject to such programs.

With respect to the second step of this implementation procedure, Kansas need only identify those cost-effective and reasonable BMPs or other nonpoint source pollution reduction measures that are part of its nonpoint source programs, including any developed under section 319 of the CWA, and that are required to be implemented under State law. Of course, the State is also free to identify cost-effective and reasonable BMPs that are not required by State law.

With respect to the third step, the State need only determine that the BMPs will be implemented. Such a determination can rely on Kansas regulations, local ordinances, performance bonds, contracts, cost share agreements and memorandums of understanding, as well as voluntary programs under certain circumstances, *e.g.,* an active nonpoint source program covering a watershed or area of concern.

Under this proposed regulation, the implementation procedures would apply to any determination under K.A.R. 28–16–28c(a)(1)(B) to allow a lowering of water quality from a point source where nonpoint sources are also contributing the pollutant of concern to the body of water. The State is also encouraged to apply or adapt the EPA's 1994 guidance to other activities that State law requires to comply with Tier 2 of the State's antidegradation requirements, including new or significantly expanded nonpoint sources.

To comply with the requirements of today's proposal, EPA would expect that permit fact sheets or statements of basis for facilities permitted under the National Pollutant Discharge Elimination System (NPDES) program describe compliance with antidegradation requirements through the application of the proposed implementation procedures. EPA may object to any permit that does not meet the requirements of the Clean Water Act. Where there is no discussion of antidegradation in the NPDES permit fact sheet, EPA may be unable to determine that the permit conditions derive from and comply with the State standards and with the requirements of the CWA.

4. Request for Comment and Data

EPA solicits comment on the antidegradation implementation procedures it is proposing. EPA also requests comments on any other procedures that could be used to implement the Kansas requirements at K.A.R. 28–16–28c(a)(1)(B). EPA also requests comment on whether it is necessary to promulgate a regulation in order to establish these implementation procedures for Kansas. The Agency will evaluate any comments, data and information submitted to EPA by the close of the public comment period. After full consideration of such comments, data, and information, EPA will make a final decision on the appropriateness of today's proposed changes and EPA's antidegradation implementation procedures with respect to the relationship between point and nonpoint sources.

V. What Federal Water Quality Standards Is EPA Proposing Under Section 303(c)(4)(B)?

A. Legal Basis

CWA section 303(c) specifies that adoption of water quality standards is primarily the responsibility of the States. However, section 303(c) also describes a role for EPA overseeing State actions to ensure compliance with CWA requirements. If EPA's review of the State's standards finds flaws or omissions, then the CWA authorizes EPA to promulgate replacement Federal standards to correct the deficiencies if the State or authorized Tribes fail to do so. See section 303(c)(4).

Section 303(c)(4) of the CWA provides two bases for promulgation of Federal water quality standards. The first basis, in 303(c)(4)(A), applies when a State submits new or revised standards that EPA determines are not consistent with the applicable requirements of the CWA and EPA's implementing regulations. If the State does not amend its rules within 90 days of EPA's disapproval to be consistent with the CWA and EPA's implementing regulations, EPA must promptly propose appropriate Federal water quality standards for that State. The second basis for EPA's action is 303(c)(4) (B), which provides that EPA shall promptly initiate promulgation ''* * * in any case where the Administrator determines that a new or revised standard is necessary to meet the requirements of this Act.'' The authority to make a finding under section 303(c)(4)(B) of the CWA and to propose and promulgate Federal regulations correcting such State water quality standards rests solely with the Administrator.

B. Water Quality Criteria for Alpha-Endosulfan and Beta-Endosulfan

1. Background

Under section 303(c)(2)(B) of the CWA, States must adopt numeric water quality criteria for toxic pollutants listed under EPA section 307(a)(1) for which EPA has published section 304(a) criteria, if the presence of the toxic pollutant in the State's waters is reasonably expected to interfere with the protection of the waters' designated uses. On December 22, 1992, EPA promulgated the National Toxics Rule (NTR), specifying the chemical-specific, numeric water quality criteria for priority toxic pollutants necessary to bring all States into compliance with the requirements of section 303(c)(2)(B) of the CWA. At that time, Kansas had failed to revise its water quality standards to meet the requirements of section 303(c)(2)(B) of the CWA. Therefore, in the NTR, EPA promulgated numeric water quality criteria for a number of toxic pollutants for the protection of aquatic life and human health in Kansas.

2. Administrator's Findings Regarding Alpha-Endosulfan and Beta-Endosulfan

The Administrator has determined that new or revised water quality standards for alpha- and beta-endosulfan are necessary to protect human health in Kansas. The Administrator bases this determination on the fact that the State has failed to adopt standards required by section 303(c)(2)(B) despite information that alpha- and beta-endosulfan may reasonably be expected to interfere with drinking water designated uses. In enacting section 303(c)(2)(B), Congress indicated the need for prompt adoption and implementation of water quality standards for toxic pollutants if the presence of the toxic pollutants in the State's waters is reasonably expected to interfere with the protection of the waters' designated uses. Therefore, a State's failure to meet this fundamental section 303(c)(2)(B) requirement of adopting appropriate standards

constitutes a failure ''to meet the requirements of the Act.'' Under this proposed rulemaking, the State of Kansas retains the ability to adopt water quality criteria for these pollutants and correct this deficiency.

3. Request for Comment and Data

EPA solicits any additional data and information that may further support or refute the need for numeric water quality criteria for alpha- and beta-endosulfan. The Agency will evaluate any data and information submitted to EPA by the close of the public comment period. After full consideration of such information, EPA will make a final decision whether the changes in today's proposal are appropriate.

C. Administrator's Finding Regarding Privately Owned Surface Waters

1. Background

In its 1998 disapproval letter, EPA identified certain existing water quality standards within the K.A.R. relating to the application of water quality standards to privately owned surface waters that EPA had previously approved, but that appeared to be inconsistent with the CWA and EPA's implementing regulations. The Region therefore indicated that this issue would be forwarded to the Administrator for action consistent with her authority under CWA section 303(c)(4)(B).

At issue is K.A.R. 28–16–28c(f), entitled Application of Standards to Privately-Owned Surface Waters, which states that the application of water quality standards to privately owned water bodies shall be subject to the provisions of K.S.A. 65–171d. The State law cited in the regulation provides in relevant part as follows: If a freshwater reservoir or farm pond is privately owned, and where complete ownership of land bordering the reservoir or pond is under common private ownership, such freshwater reservoir or farm pond shall be exempt from water quality standards in Kansas except as it relates to water discharges or seepage from the reservoir or pond to waters of the State, either surface water or ground water, or as it relates to the public health of persons using the reservoir or pond or waters therefrom. This is inconsistent with the CWA and EPA's implementing regulations to the extent that it would potentially exempt from water quality standards surface water—regardless of its ownership characteristics—that may be a water of the United States. Kansas' exclusion of private waters from protections under the CWA could also be a problem in the State's NPDES program. Kansas' failure to apply the State's water quality standards to all surface waters—including private waters—that are waters of the United States was specifically identified as a program deficiency by EPA in an October 1, 1990, letter from Martha Steincamp, EPA Regional Counsel, to David Traster, General Counsel for KDHE. As a result of discussions between EPA's Regional Office and KDHE, this statutory deficiency was to have been addressed by legislative action in the 1991 legislative session, but no such correction occurred.

The CWA does not recognize distinctions in ownership in the application of water quality standards to waters of the United States. Rather, the CWA requires that water quality standards apply to all waters of the United States, making no distinction between publicly and privately owned waters. The Administrator therefore has determined under section 303(c)(4)(B) that the identified provisions are inconsistent with the CWA and EPA's implementing regulations. In today's **Federal Register** notice, EPA is proposing to narrow the exemption for privately owned surface waters (notably lakes and wetlands) so that the exemption would not apply to waters of the United States. Whether a particular water is a water of the United States is a water body-specific determination. EPA is not aware of any waters of the United States in Kansas that are currently exempted from State water quality standards because of to the State's provision; nonetheless, EPA believes the State's provision creates a potential loophole that may preclude the State from protecting a waterbody from degradation. Every privately owned waterbody that is a water of the United States is entitled to—and indeed requires—protection under the CWA. Should the need ever arise to apply water quality standards to any privately owned water that is a water of the United States, the State's standard for unclassified waters would apply.

2. Request for Comment and Data

EPA solicits any additional data and information that may further support or refute the changes being proposed today. The Agency will evaluate any data and information submitted to EPA by the close of the public comment period. After full consideration of such information, EPA will make a final decision whether the changes in today's proposal are appropriate.

VI. Economic Analysis

This proposed rule would have no direct impact on any entity because the proposed rule, once finalized, will simply establish water quality standards (*e.g.,* ambient water quality criteria) which by themselves do not impose any costs. These standards, however, may serve as a basis for development of NPDES permit limits. In Kansas, the State is the NPDES permitting authority and retains considerable discretion in implementing standards. Thus, until the State implements these water quality standards, there will be no effect on any entity. Nonetheless, EPA prepared a preliminary analysis to evaluate potential costs to NPDES dischargers in Kansas associated with future State implementation of EPA's Federal standards.

Any NPDES-permitted facility that discharges to water bodies affected by the proposed rule or that is subject to effluent limits for pollutants for which EPA is proposing to promulgate criteria could potentially incur costs to comply with the proposed rule's provisions. The types of affected facilities may include industrial facilities and publically owned treatment works (POTWs). EPA did not consider the potential costs for nonpoint sources, such as agricultural and forestry-related nonpoint sources, although EPA recognizes that controls on these sources may be necessary to achieve designated uses. Nonpoint source discharges are technically difficult to model and evaluate for costing purposes because they are intermittent, highly variable, and occur under different hydrologic or climatic conditions than continuous discharges from industrial and municipal facilities, which are evaluated under critical low flow or drought conditions. Thus, the evaluation of nonpoint sources and their effects on the environment is highly site specific and data sensitive. In addition, EPA did not address the potential monetary benefits of this proposed rule for Kansas.

A. Identifying Affected Facilities

EPA used available data to identify the total number of facilities discharging to Kansas surface waters and the number that may be affected by the provisions of today's proposed rule. According to EPA's Permit Compliance System (PCS), there are 1,253 NPDES-permitted facilities in Kansas. Fifty-seven of the facilities are classified as major dischargers, and 1,196 are minor dischargers. The total includes 320 nondischarging animal feedlots and 85 sand and gravel quarries, which are all classified as minor dischargers.

In determining the number of facilities potentially affected by the proposed rule, EPA did not include non-discharging animal feedlots or sand and gravel quarries. Because CWA

section 301(a) prohibits point sources, including concentrated animal feeding operations (CAFOs), from discharging to surface waters without a permit, and because NPDES permits for CAFOs in turn prohibit discharges, EPA was not aware of any CAFO that would be impacted by EPA's proposal to upgrade the water use designation. (The only CAFOs that would be affected would be those discharging in violation of CWA section 301(a) or their permit, and EPA is not aware of such CAFOs in Kansas.) Nonetheless, EPA is aware that there may be facilities that presently are not subject to NPDES permitting requirements but that theoretically could be designated as CAFOs. EPA therefore requests information or data on any animal feeding facilities in Kansas that are discharging to waters for which EPA proposes to upgrade their designated uses and that therefore might be affected by this proposal.

EPA did not consider sand and gravel quarries because they would not discharge pollutants of concern in EPA's proposed rule. Sand and gravel quarries likely have permit limits only for total suspended solids. In addition, some quarries may have no discharge.

Therefore, the universe of dischargers that might be affected by EPA's proposed rule includes 848 permitted facilities (57 majors and 791 minors).

To identify facilities potentially affected by the proposed designated use change, EPA determined which of the 848 permitted facilities are located on water bodies with proposed changed use designations. EPA evaluated 1,485 stream segments and lakes for today's proposed rule. However, EPA could not discern the location of all facilities with respect to these segments. For water bodies where EPA today proposes to upgrade the designated use, EPA solicits any additional data and information (*e.g.,* if there are discharges to such streams; how the discharges are permitted; concentrations of pollutants in such discharges, etc.) that may further support or refute the attainability of EPA's proposed changes.

To identify facilities discharging to waters lacking primary contact recreation uses, EPA matched water body data to facility records in EPA's Permit Compliance System (PCS) and Industrial Facilities Database and a database provided by the State of Kansas. This effort identified 154 facilities (6 majors and 148 minors) that discharge to segments affected by the proposed rule. However, EPA could not discern the discharge location of over 300 facilities, so it is not known whether these facilities would be affected by the proposed rule or not. To estimate costs, EPA assumed these facilities to be located on affected water bodies in the same proportion as identified facilities.

Of the 1,485 stream segments and lakes evaluated, one is also lacking an aquatic life support use (Whiskey Creek). Using the same procedures, EPA identified one facility that discharges to Whiskey Creek.

To identify facilities discharging to waters affected by the proposed assumed flow changes, EPA linked PCS facility data and State-provided facility data with stream segment information from EPA's National Computer Center Gauge File. EPA identified 116 facilities (3 majors and 113 minors) on water bodies with 7Q10 flows less than 1 cfs. Of these 116 facilities, 69 facilities (2 majors and 67 minors) were located on streams with zero flow. Thus, EPA assumed that facilities evaluated for assumed flow changes would also account for those facilities impacted by the effluent created habitat provision of today's proposed rule. As such, EPA did not assess the costs for these two provisions separately. Note, however, that flow data were not available for over half of the facilities. To estimate costs, EPA assumed that the proportion of facilities on water bodies with flow data that had low flows less than 1 cfs would be the same as the proportion of facilities on water bodies without flow data with low flows less than 1 cfs. EPA requests comment on its assumption that the assumed flow analysis accounts for facilities affected by the effluent created habit provision of today's proposal. EPA solicits any additional data and information on facilities discharging to waters affected by the effluent created habitat provision that may further support or refute this approach.

EPA found no facilities in PCS in Kansas with effluent limits for alpha-endosulfan or beta-endosulfan. Although this does not necessarily mean that there would be no impact from proposed water quality criteria for these pollutants (*i.e.,* facilities may have these pollutants in their effluent and may be subject to effluent limits under the proposed criteria), EPA does not have data with which to evaluate effluent concentrations. EPA requests that persons with data or information on the discharge of alpha- or beta-endosulfan to surface waters in Kansas to provide it to the Agency for evaluation.

With respect to EPA's proposal to apply the States' water quality standards to privately owned surface waters that are waters of the United States, EPA was unable to evaluate the economic impact of that proposal for several reasons. EPA was unable to determine whether any such waters received discharges that, as a consequence of the proposal, henceforth could be subject to the CWA's permitting requirements. Similarly, EPA did not evaluate potential costs associated with proposing to promulgate a regulation that would require Kansas to apply the implementation procedures in 40 CFR 131.34(f) when applying the States' antidegradation policy (at K.A.R. 28–16–28c(a)(1)(B)) to determine whether to allow a lowering of surface waters quality by point sources of pollution where nonpoint sources also contribute the pollutant of concern to that body of water. EPA solicits any additional data and information (*e.g.,* where such waters are located, how discharges are permitted; concentrations of pollutants in such discharges, etc.) that may assist EPA in estimating potential indirect costs to point and nonpoint sources of pollution associated with this proposed provision.

B. Selecting a Sample

Once EPA identified facilities potentially affected by the proposed rule, it selected a sample of facilities for evaluation of potential compliance costs. EPA stratified the potentially affected facilities by major and minor classification and included all major facilities in each sample. EPA then drew a random sample of potentially affected minor facilities for evaluation. In addition, EPA evaluated separately the one facility discharging to the water body lacking an aquatic life use. The number of facilities identified and the number of facilities used for cost estimation are presented in the following table.

NUMBER OF FACILITIES IDENTIFIED AND EVALUATED

Provision	Identified facilities [1]			Evaluated facilities		
	Majors	Minors	Total	Majors	Minors	Total
Designated Uses:						
Primary Contact Recreation [2]	6	148	154	6	9	15
—Aquatic Life [3]	1	0	1	1	0	1
Assumed Flow [4]	3	113	116	3	7	10
Water Quality Criteria	0	0	0	0	0	0

[1] Additional facilities may be affected but could not be identified (*i.e.,* the universe of potentially affected facilities may exceed the estimates shown).
[2] Facilities discharging to water bodies lacking primary contact recreation use.
[3] Facilities discharging to water bodies lacking aquatic life use.
[4] Facilities discharging to streams with a 7Q10 flow of less than one.

C. Methodology for Estimating Potential Compliance Costs

1. Proposed Designated Uses

EPA evaluated the separate samples of facilities for potential costs resulting from EPA's proposal to designate waters for primary contact recreation and aquatic life support. For primary contact recreation, EPA assumed that a sample facility would have a reasonable potential to exceed water quality criteria for fecal coliforms (and require a permit limit) if, for facilities with effluent data for fecal coliforms, the maximum effluent concentration exceeded the most stringent water quality criterion (the monthly average of 200 colonies per 100 ml). EPA also assumed a facility to have reasonable potential to exceed water quality criteria if a limit for fecal coliforms is included in its existing permit or if it discharges treated domestic sewage that has not been disinfected.

EPA assumed that projected effluent limits would be the same as existing water quality criteria for fecal coliforms (a monthly geometric mean of 200 colonies per 100 ml and a weekly geometric mean of 400 colonies per 100 ml) because existing EPA guidance recommends this approach (U.S. EPA, 1977).

EPA assumed that a sample facility would incur costs when its maximum effluent concentration (or existing permit limit, whichever is smaller) exceeded the most stringent water quality criterion for fecal coliforms. EPA also assumed that a facility would incur costs if it discharges domestic sewage without a disinfection system currently in place.

For this analysis, EPA assumed that facilities with disinfection systems in place but whose effluents do not comply with projected effluent limits could be brought into compliance with treatment process optimization. EPA assumed that UV light disinfection would be installed at facilities with effluents containing domestic sewage that do not have a disinfection system in place.

One facility discharges to a stream that is not designated as supporting aquatic life uses. However, because effluent data are not available for this facility, EPA estimated that it does not have reasonable potential to cause exceedences of chronic aquatic criteria. Consequently, EPA anticipates no cost for this provision.

2. Proposal Regarding Assumed Flow

EPA analyzed reasonable potential for all toxic pollutants with effluent data or limits in existing NPDES permits under two scenarios. For a low scenario, EPA calculated a projected effluent quality (PEQ) value for pollutants with effluent data above detection levels. The PEQ is an effluent value statistically adjusted for uncertainty which EPA uses to estimate a maximum value. The methodology to derive a PEQ is based on EPA's *Technical Support Document for Water Quality-based Toxics Control* (TSD) (1991).

EPA then determined that waste load allocations (WLAs) for each sample facility would be equal to the chronic criterion (or chronic continuous concentration, CCC) because there would be no dilution available (*i.e.,* all sample facilities had 7Q10 stream flows equal to zero). WLAs for metals are expressed in dissolved form (*i.e.,* a translator of one was used to convert criteria from dissolved to total). EPA estimated that a facility had reasonable potential to exceed the water quality criterion for a pollutant when its PEQ exceeded the WLA. For the high scenario, EPA assumed that a facility had reasonable potential to exceed water quality criteria for a pollutant if it had a limit in its existing NPDES permit or if it had reasonable potential under the low scenario. EPA calculated projected effluent limits based on the methods recommended in EPA's TSD.

Dischargers may be affected by EPA's proposed action if their current permit limits or PEQs exceed projected effluent limits developed using actual stream flows. Affected dischargers would need to implement measures to either reduce pollutant concentrations in their effluent or seek relief (*e.g.,* through total maximum daily loads (TMDLs), site-specific criteria, or water quality variances). EPA used different approaches to estimate potential cost impacts under its low and high scenarios.

For the low scenario, EPA estimated pollution control costs in situations where the maximum effluent concentration (MEC) exceeded projected effluent limits and used the MEC as the baseline effluent quality value. However, if the MEC exceeded an existing permit limit, EPA used the existing permit limit as a baseline concentration to avoid including costs that are associated with complying with current State regulations. EPA estimated costs based on the incremental pollutant loading reductions required to achieve the projected limits. However, if the annualized cost to remove a pollutant exceeded $200 per toxic pound-equivalent, EPA assumed that the facility would pursue regulatory relief (*e.g.,* a variance) at a cost of $200,000 per pollutant (U.S. EPA, 1995).

For the high scenario, EPA estimated pollution control costs using the existing permit limit as a baseline effluent concentration. Where an existing permit limit was not available, EPA used the MEC as the baseline effluent quality concentration. Again, EPA estimated costs based on the incremental pollutant loading reductions required to achieve the projected limits. However, EPA did not assume that facilities would pursue regulatory relief even if costs exceeded $200 per toxic pound-equivalent.

For both scenarios, EPA followed a decision framework based on the assumption that a facility would pursue lower cost control strategies prior to adding end-of-pipe treatment.

EPA estimated loading reductions as the difference between the baseline

concentration and the projected WQBEL. Note, however, that this convention likely results in an upper bound estimate of loading reductions because facilities typically discharge at levels below the MEC.

EPA converted pollutant loading reductions from pounds (lbs) to toxic pounds-equivalent (lbs-eq) using toxicity weighting factors from the Assessment of Compliance Costs Resulting from Implementation of the Final Great Lakes Water Quality Guidance (U.S. EPA, 1995). EPA uses the toxic weights presented in the Great Lakes analysis to allow comparability of cost-effectiveness among previous water quality regulatory efforts. Toxicity weighting factors are primarily derived from EPA chronic freshwater aquatic criteria and toxicity values, but are also based on human health criteria when a human health criterion has been established. The toxicity weighting factors used for the analysis are standardized to the former copper water quality criterion of 5.6 µg/L.

EPA did not evaluate reasonable potential for non-toxic, conventional pollutants (*e.g.,* dissolved oxygen) for facilities discharging to streams with a 7Q10 flow of less than one cfs. EPA found that most of the sample facilities do not have water quality-based effluent limits for conventional pollutants in existing NPDES permits. EPA solicits effluent data and information on treatment technologies currently in place for conventional pollutants for facilities discharging to streams with a 7Q10 flow of less than one cfs.

D. Results

1. Proposed Designated Uses

EPA estimated the costs associated with its proposal to designate water bodies for primary contact recreation use and aquatic life use separately. For primary contact recreation use, there are 154 potentially affected facilities out of a total of 511 identified facilities. However, EPA could not obtain reach code information or location data to determine if 337 facilities are affected or not. For these facilities, EPA assumed that the same percentage would be affected as for identified facilities (estimating separately for major and minor facilities).

EPA estimated that the total statewide cost associated with designating the affected water bodies for primary contact recreation would be approximately $1.9 million. EPA estimated that costs for major dischargers are negligible because five of the six major dischargers sampled presently have disinfection facilities and NPDES limits that are consistent with primary contact recreation. For minors, however, eight of the nine sampled facilities do not have disinfection facilities, effluent limits, or monitoring data for fecal coliforms.

EPA estimated that the potential cost associated with reinstating aquatic life uses on the affected water bodies is zero. However, this estimate is based on the one affected facility that could be identified.

2. Proposal Regarding Assumed Flow

For the assumed flow provision, there are 116 potentially affected facilities out of a total of 517 identified facilities. However, EPA did not have information to determine if 331 facilities are affected or not. Again, for these facilities, EPA assumed that the same percentage would be affected as for identified facilities (estimating separately for major and minor facilities).

EPA estimated that the total statewide cost may range from $28,000 to $128,000 annually. The costs are minimal because, of the ten sample facilities, EPA anticipates that two major facilities would incur pollutant minimization control costs under the high scenario. Under the low scenario, only one major facility would require some control, and EPA assumed that this facility would pursue regulatory relief. EPA does not anticipate any costs for minor facilities because none of the facilities have limits or data for toxic pollutants.

EPA does not anticipate any resulting pollutant loading reductions under the low scenario. EPA anticipates small reductions in the discharge of chromium VI and copper under the high scenario.

EPA did not evaluate potential costs associated with removing the assumed flow provision for conventional pollutants. EPA recognizes that costs associated with installing new treatment technologies for treating conventional pollutants could be significant. Facility-specific cost analysis can be used to support a variance from the State's standard, or to justify a lower aquatic life use with less stringent criteria; however, such information is not a basis for assuming that dilution exists in situations where the stream flow, at times, is at or near zero. EPA's proposed rule, if finalized, would not affect the State's ability to issue pollutant-specific variances where information shows that one of the factors in 40 CFR 131.10(g) are met, including information that shows such water quality-based controls would result in substantial and widespread economic and social impact. EPA's cost analysis for the final rule will fully address costs associated with applying the 7Q10 to conventional pollutants.

3. Total Statewide Costs

The following table summarizes the total estimated statewide costs of the proposed rule. The bulk of the costs are attributable to the designation of affected water bodies for primary contact recreation use. As described earlier, much of the costs for this provision result from the need for minor dischargers to install disinfection.

TOTAL ESTIMATED STATEWIDE COSTS BY PROVISION

[July 1999 $/yr]

Provision	Estimated annual cost
Designated Use:	
—Primary Contact Recreation	1,900,000
—Aquatic Life	0
Assumed Flow	0–100,000
Total	1,900,000–2,000,000

EPA recognizes that its identification of facilities that may be affected by the proposed rule is based on limited data. EPA could not determine whether over 300 facilities would or would not be affected because of a lack of data on facility locations. While the assumption that the proportion of facilities in this indeterminate category that would be affected would be similar to the proportion of facilities known to be affected by the proposed rule is

reasonable, EPA solicits information that would help resolve the universe of facilities that would be affected. Should the proportion of facilities in the indeterminate category be substantially different from the proportion of facilities in the known category, then statewide costs may also differ from those reported here.

VII. Alternative Regulatory Approaches and Implementation Mechanisms

In developing a final rule, EPA will consider any data or information submitted to the Agency by the close of the comment period. However, it is possible that data and information may become available after completion of this rulemaking that will be material to water quality standards for Kansas. If EPA ultimately promulgates Federal use designations for Kansas, there are several mechanisms available to ensure that the water quality standards and their implementing mechanisms appropriately take into account such new information. These mechanisms are described in VII. A., B., C., and D.

The State should be aware, however, that EPA considers designated use changes, site-specific criteria, and variances developed pursuant to this provision to be modifications to the State's water quality standards. Federal regulations at 40 CFR 122.44(d)(1) require that NPDES permits include limitations necessary to achieve water quality standards adopted under section 303 of the CWA. Therefore, a designated use change, a site-specific criterion, or a variance cannot be the basis for NPDES permit limitations until the State has adopted it as part of its water quality standards, has submitted it to EPA and EPA has approved it. See 40 CFR 131.21(c) & (d). As with any other revision to the State's water quality standards, EPA would then review these revisions to determine whether they are scientifically defensible in accordance with 40 CFR 131.11(b)(1)(iii), or meet the requirements of 40 CFR 131.10(g), as applicable. EPA will also consider whether the appropriate procedural requirements have been met, such as public participation and certification by the appropriate legal authority within the State. Therefore, if EPA promulgates that regulation as proposed, then Kansas would not be able to employ its designated use changes, site-specific criteria, and variances as a basis for NPDES permit limits until Kansas submits and EPA approves them.

A. Designating Uses

States have considerable discretion in designating uses. The State may find that changes in use designations are warranted. As stated, EPA will review any new or revised use designations adopted by the State for any of the water bodies in today's proposal to determine if the standards meet the requirements of the CWA and implementing regulations. If approved, EPA would subsequently initiate withdrawal of any final Federal water quality standards which may result from today's proposal. However, EPA cautions the State that it must conduct a use attainability analyses as described in 40 CFR 131.10(g) when adopting water quality standards that result in uses that are not specified in section 101(a)(2) of the CWA, or that result in subcategories of uses specified in section 101(a)(2) that require less stringent criteria.

B. Site-Specific Criteria

The State may also develop data that indicates that a site-specific water quality criterion for a particular pollutant is appropriate, and then take action to adopt such a criterion into its water quality standards. Site specific criteria are allowed by regulation and are subject to EPA review and approval. 40 CFR 131.11 requires States to adopt criteria that protect designated uses, that are based on sound scientific rationale, and that contain sufficient parameters or constituents to protect the designated use. In adopting water quality criteria, States should establish numerical values based on EPA's recommended 304(a) criteria guidance, 304(a) criteria guidance modified to reflect site specific conditions, or other scientifically defensible methods, or should establish narrative criteria where numerical criteria cannot be determined or where necessary to supplement narrative criteria.

Currently, EPA guidance specifies three procedures for States and Tribes to follow in deriving site-specific criteria. These are the Recalculation Procedure, the Water-Effect Ratio Procedure and the Resident Species Procedure. These procedures can be found in the *Water Quality Standards Handbook* (EPA–823–B940005a, 1994). There is currently draft guidance for the development of site-specific criteria for the protection of human health in the draft *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health*. EPA also recognizes there may be naturally occurring concentrations of pollutants which may exceed the national criteria published under section 304(a) of the CWA, and has issued policy guidance on establishing site specific aquatic life criteria equal to natural background. (Memo from Tudor T. Davies, Director, Office of Science and Technology to the Regional Water Management Division Directors, and State and Tribal Water Quality Management Program Directors, dated 11/5/97.)

C. Variances

Water quality standards variances are an alternative that can provide a facility with a limited period of time to comply with water quality standards. The proposed rule contains a Federal variance procedure for the designated uses being proposed today. However, the procedures described later in this section can also be used by the State to develop variances of State-adopted water quality standards.

EPA believes variances are particularly suitable when the cause of nonattainment is discharger-specific and it appears that the designated use in question will eventually be attainable. EPA has approved the granting of water quality standards variances by States in circumstances that would otherwise justify changing a use designation on grounds of unattainability (*i.e.,* one or more of the six circumstances contained in 40 CFR 131.10(g)). In contrast to a change in standards that removes a use designation for a water body, a water quality standards variance can apply only to the discharger to whom it is granted and only to the pollutant parameter(s) upon which the finding of unattainability was based, and only for a limited period of time; the underlying standard remains in effect for all other purposes.

For example, if a designated aquatic life use is currently precluded because of high levels of metals from past mining activities that cannot be remediated in the short term, but it is expected that water quality will eventually improve, a temporary variance may be granted to a discharger with relaxed criteria for such metals, until remediation progresses and the use becomes attainable. The practical effect of such a variance is to allow a permit to be written using less stringent criteria, while encouraging ultimate attainment of the underlying standard. A water quality standards variance provides a mechanism for assuring compliance with sections 301(b)(1)(C) and 402(a)(1) of the CWA that require NPDES permits to meet applicable water quality standards, while granting temporary relief to point source dischargers.

While 40 CFR 131.13 allows States to adopt variance procedures for State-adopted water quality standards, such State procedures may not be used to grant variances from Federally adopted standards. EPA believes that it is appropriate to provide comparable

Federal procedures where, as proposed here, EPA adopts use designations which rely, at least in part, on a rebuttable presumption that fishable/swimmable uses are attainable or adopts more stringent criteria for the State's use designations. EPA is proposing to authorize the Region VII Regional Administrator to grant water quality standards variances where a permittee submits data indicating that an EPA-designated use is not attainable for any of the reasons in 40 CFR 131.10(g). Therefore today's rule proposes variance procedures that would apply to the designated uses promulgated by EPA for the specific stream segments named in today's proposal at proposed 40 CFR 131.34(g) and (h).

Today's proposed rule spells out the process for applying for and granting such variances. Authorizing the Regional Administrator to grant variances should expedite the processing of variance requests. EPA is proposing to use informal adjudication processes in reviewing and granting variance requests. That process is contained in 131.34(i) of today's proposed rule. Because water quality standards variances, technically speaking, are revised water quality standards, the proposal provides that the Regional Administrator will provide public notice of the proposed variance and provide an opportunity for public comment. EPA understands that variance-related issues can often arise in the context of permit issuance. EPA Region VII will seek to work closely with the State permitting authorities to ensure that variance requests will be considered in tandem with the State NPDES permitting process.

The proposed variance procedures would require an applicant for a water quality standards variance to submit a request to the Regional Administrator (or his delegatee) with supporting information.

Under its proposal, as in the national program, the burden is on the applicant to demonstrate to EPA's satisfaction that the designated use is unattainable for one of the reasons specified in 40 CFR 131.10(g). A variance may not be granted if the use could be attained, at a minimum, by all dischargers implementing effluent limitations required under sections 301(b) and 306 of the CWA and the applicant implementing reasonable best management practices for nonpoint source control.

Under the proposal, a variance may not exceed three years or the term of the NPDES permit, whichever is less. A variance may be renewed if the permittee demonstrates that the use in question is still not attainable. Renewal of the variance may be denied if EPA finds that the conditions of 40 CFR 131.10(g) are not met.

EPA is soliciting comment on the need for a variance process for EPA-promulgated use designations, the appropriateness of the particular procedures proposed today, and whether the proposed variance procedures are sufficiently detailed.

D. Total Maximum Daily Loads (TMDLs)

State development of TMDLs is an alternative approach for allocating loads of pollutants and ensuring attainment of designated uses in these water bodies. Section 303(d) of the CWA and its implementing regulations establish the TMDL process to provide a mechanism for allocating more stringent water quality-based requirements when technology-based controls and other controls are inadequate to achieve applicable water quality standards. The TMDL process can broaden the opportunity for public participation, expedite water quality-based NPDES permitting, and lead to technically sound and legally defensible decisions for attaining and maintaining water quality standards. In addition, the TMDL process provides a mechanism for integrating the management of both point and nonpoint pollution sources that together may contribute to a water body's impairment. (See: *Guidance for Water Quality-based Decisions: The TMDL Process,* EPA 440–4–91–001, April 1991.)

VIII. Administrative Requirements and Related Government Acts

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether a regulatory action is ''significant'' and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Executive Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of the Executive Order 12866, it has been determined that this rule is a ''significant regulatory action.'' As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

B. The Regulatory Flexibility Act (RFA), As Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

The Regulatory Flexibility Act (RFA) as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA) (5 U.S.C. 601 *et seq.*), generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations and small governmental jurisdictions.

For purposes of assessing the impacts of today's proposed rule on small entities, small entity is defined as: (1) A small business according to RFA default definitions for small business (based on SBA size standards); (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering these economic impacts of today's proposed rule on small entities, the Administrator hereby certifies that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule will not impose any requirements on small entities. The RFA requires analysis of the impacts of a rule on the small entities subject to the rule's requirements. *See United States Distribution Companies* v. *FERC,* 88 F.3d 1105, 1170 (D.C. Cir. 1996). Today's proposed rule establishes no requirements applicable to small entities, and so is not susceptible to regulatory flexibility analysis as prescribed by the RFA. (''[N]o [regulatory flexibility] analysis is necessary when an agency determines

that the rule will not have a significant economic impact on a substantial number of small entities *that are subject to the requirements of the rule,'' United Distribution* at 1170, *quoting Mid-Tex Elec. Co-op* v. *FERC,* 773 F.2d 327, 342 (D.C. Cir. 1985) (emphasis added by *United Distribution* court).) The Agency is thus certifying that today's proposed rule will not have a significant economic impact on a substantial number of small entities, within the meaning of the RFA.

Under the CWA water quality standards program, States must adopt water quality standards for their waters and must submit those water quality standards to EPA for approval; if the Agency disapproves a State standard and the State does not adopt appropriate revisions to address EPA's disapproval, EPA must promulgate standards consistent with the statutory requirements. EPA also has the authority to promulgate criteria or standards in any case where the Administrator determines that a new or revised standard is necessary to meet the requirements of the Act. These State standards (or EPA-promulgated standards) are implemented through various water quality control programs including the National Pollutant Discharge Elimination System (NPDES) program, which limits discharges to navigable waters except in compliance with an EPA permit or a permit issued under an approved State program. The CWA requires that all NPDES permits include any limits on discharges that are necessary to meet applicable water quality standards.

Thus, under the CWA, EPA's promulgation of water quality standards establishes standards that the State implements through the NPDES permit process. The State has discretion in deciding how to meet the water quality standards and in developing discharge limits as needed to meet the standards. While the State's implementation of Federally promulgated water quality standards *may* result in new or revised discharge limits being placed on small entities, the standards themselves do not apply to any discharger, including small entities.

Today's proposed rule, as explained earlier, does not itself establish any requirements that are applicable to small entities. As a result of this action, the State of Kansas will need to ensure that permits it issues include any limitations on discharges necessary to comply with the standards established in the final rule. In doing so, the State will have a number of discretionary choices associated with permit writing. While Kansas's implementation of the rule may ultimately result in some new or revised permit conditions for some dischargers, including small entities, EPA's action today does not impose any of these as yet unknown requirements on small entities.

C. The Paperwork Reduction Act

This rule imposes no new or additional information collection requirements. Therefore, this rule is not subject to the Paperwork Reduction Act.

D. The Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's proposed rule contains no Federal mandates (under the regulatory provisions of Title II of the UMRA) for State, local or Tribal governments or the private sector. The proposed rule imposes no enforceable duty on the State or any local or Tribal government or the private sector; rather, this rule proposes designated uses for certain waterbodies in Kansas which, when combined with State adopted water quality criteria, constitute water quality standards for those waterbodies. The State may use these resulting water quality standards in implementing its water quality control programs. Today's proposed rule does not regulate or affect any entity and, therefore, is not subject to the requirements of sections 202 and 205 of the UMRA.

EPA has determined that this proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments. As stated, the proposed rule imposes no enforceable requirements on any party, including small governments. Moreover, any water quality standards, including those proposed here, apply broadly to dischargers and are not uniquely applicable to small governments. Thus, this proposed rule is not subject to the requirements of section 203 of UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

Under section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This proposed rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the

distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The proposed rule would not affect the nature of the relationship between EPA and States generally, for the rule only applies to waterbodies in Kansas. Further, the proposed rule would not substantially affect the relationship of EPA and the State of Kansas, or the distribution of power or responsibilities between EPA and the various levels of government. The proposed rule would not alter the State's authority to issue NPDES permits or the State's considerable discretion in implementing these water quality standards. Further, this proposed rule would not preclude Kansas from adopting water quality standards that meet the requirements of the CWA. Thus, the requirements of section 6 of the Executive Order do not apply to this proposed rule.

Although section 6 of Executive Order 13132 does not apply to this rule, EPA did consult with State and local government representatives in developing this proposed rule. A summary of the concerns raised during that consultation and EPA's response to those concerns is provided later in this section. In its communications with EPA, KDHE expressed concern that some of the standards disapproved by EPA in 1998 and for which EPA is today proposing Federal replacement regulations, would result in substantial costs to small communities without significant environmental benefits. Chief among these issues was EPA's disapproval of the Kansas assumed low flow provision, that allows discharges to water bodies with a 7Q10 flow of less than 1 cubic foot per second (cfs) to use an assumed 7Q10 of 1 cfs in setting permit limits. EPA disapproved this provision in the State standards because it allows water quality-based NPDES permit limits to be derived based on dilution that does not exist. As explained previously, the economic impact of meeting water quality standards may be taken into consideration by the State in making site-specific determinations during preparation of use attainability analyses and variances, but not in adopting water quality standards for statewide implementation.

F. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian Tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the Tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected Tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian Tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.''

Today's proposed rule does not significantly or uniquely affect the communities of Indian Tribal governments, nor does it impose substantial direct compliance costs on them. In this proposed action, EPA expressly excludes waters in Indian country. Therefore, the requirements of section 3(b) of Executive Order 13084 do not apply to this proposed rule.

G. The Endangered Species Act

Section 7 of the Endangered Species Act (ESA), 16 U.S.C. 1536, requires Federal agencies, in consultation with the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS), to ensure their actions are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of habitat of such species which have been designated as ''critical.'' Consultation is designed to assist Federal agencies in complying with the requirements of section 7 by supplying a process within which FWS and NMFS provide such agencies with advice and guidance on whether an action complies with the substantive requirements of ESA.

EPA initiated informal consultation with the FWS under section 7 of the ESA in November 1997 regarding EPA's planned action to approve in part, and disapprove in part, water quality standards revisions submitted by Kansas in 1994. By letter dated February 19, 1998, the FWS notified EPA that it concurred with EPA's determination that the partial approval, and partial disapproval of the Kansas water quality standards revisions of 1994 should not adversely impact Federally-listed and endangered species. EPA continued to correspond with the FWS throughout the period during which Kansas revised its water quality standards and submitted them to EPA for approval in August 1999.

EPA continued its consultation with FWS under section 7 of the ESA regarding EPA's planned approval of some of the 1999 revisions to the Kansas water quality standards that corrected standards previously disapproved by EPA in its 1998 action. As a result of this consultation, the FWS issued a biological opinion dated January 6, 2000, regarding the State of Kansas' Water Quality Standards program. The opinion concurred with EPA's determination that EPA's partial approval of the 1999 revisions to the Kansas water quality standards program should have no adverse effect on any Federally listed species or species proposed for listing.

In its January 6, 2000, letter, FWS also indicated that it would continue to coordinate ''with EPA to resolve the disapproval issues in the State action.'' EPA continues to actively consult with FWS regarding this action to establish Federal water quality standards in Kansas and plans to conclude consultation on these proposed Federal standards before taking final action.

H. The National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA) Public Law No.104–113, 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through the Office of Management and Budget, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards. Nevertheless, EPA welcomes comments on this aspect of the proposed rulemaking and specifically invites the public to identify potentially-applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

I. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This proposed rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This rule establishes water quality standards o meet the requirements of the CWA and the implementing Federal regulations.

The public is invited to submit or identify peer-reviewed studies and data, of which the agency may not be aware, that indicates these water quality standards are not adequate to protect children's health.

J. Executive Order 12886: Plain Language

Executive Order 12886 and the President's memorandum of June 1, 1998 require each agency to write all rules in plain language. We invite your comments on how to make this proposed rule easier to understand. For example:

—Have we organized the material to suit your needs?

—Are the requirements in the rule clearly stated?

—Does the rule contain technical language or jargon that isn't clear?

—Would a different format (grouping and order of sections, use of headings, paragraphing) make the rule easier to understand?

—Would more (but shorter) sections be better?

—What else could we do to make the rule easier to understand?

List of Subjects in 40 CFR Part 131

Environmental protection, Indians-lands, Reporting and recordkeeping requirements, Water pollution control.

Dated: June 16, 2000.

Carol M. Browner,

Administrator.

For the reasons set forth in the preamble, EPA proposes to amend 40 CFR part 131 as follows:

PART 131—WATER QUALITY STANDARDS

1. The authority citation for part 131 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*

Subpart D—[Amended]

2. Section 131.34 is added to read as follows:

§ 131.34 Kansas.

(a) *Do Kansas' water quality standards apply to ''privately owned surface waters''?* The State's water quality standards apply to all waters of the U.S. within the jurisdiction of the State.

(b) *What criteria apply to the Domestic Water Supply Use in Kansas?* In addition to the criteria specified at K.A.R. 28–16–28e(c)(3) and at § 131.36 of this Part for Kansas, the following criteria apply to Kansas surface waters designated for Domestic Water Supply Use:

Pollutant	Criterion
alpha-endosulfan	110 µgliter.
beta-endosulfan	110 µgliter.

(c) *What uses must be protected for stream segments in Kansas for which continuous flow is sustained primarily through the discharge of treated effluent?* Designated uses at K.A.R. 28–16–28d and K.A.R. 28–16–28e for stream segments for which continuous flow is sustained primarily through the discharge of treated effluent must be protected (irrespective of the development of a use attainability analysis that demonstrates that a different use may be appropriate) until EPA approves a revision to the applicable use designation.

(d) *What design flow applies when establishing mixing zones to implement chronic aquatic life criteria in Kansas?* The design flow of 7Q10, 4B3, or other scientifically defensible design flows approved by EPA shall be used in calculating the mixing zone cross-sectional area or volumetric flow in the implementation of chronic aquatic life criteria:

(1) Under K.A.R. 28–16–28c(b)(7)for discharges of all pollutants to any surface waters designated in Kansas as exceptional State waters; and

(2) Under K.A.R. 28–16–28c(b)(8), (A) through (C), for discharges of all pollutants to any surface waters designated in Kansas as general purpose waters, including special aquatic life use waters, expected aquatic life use waters, and restricted aquatic life use waters.

(e) *What design flow applies when establishing mixing zones to implement acute aquatic life criteria in Kansas?* The design flow of 1Q10, 1B3, or other scientifically defensible design flows approved by EPA shall be used in calculating the mixing zone cross-sectional area or volumetric flow in the implementation of acute aquatic life criteria:

(1) Under K.A.R. 28–16–28c(b)(7)for discharges of all pollutants to any surface waters designated in Kansas as exceptional State waters; and

(2) Under K.A.R. 28–16–28c(b)(8), (A) through (C), for discharges of all pollutants to any surface waters designated in Kansas as general purpose waters, including special aquatic life use waters, expected aquatic life use waters, and restricted aquatic life use waters.

(f) *What procedures apply to implement the provisions of Kansas' antidegradation requirements that would allow the lowering of surface water quality by point sources where nonpoint sources also contribute the pollutant of concern to that body of water?* The following implementation procedures are for use when applying K.A.R. 28–16–28c(a)(1)(B) to determine whether to allow a lowering of surface water quality by point sources of pollution where nonpoint sources also contribute the pollutant of concern to that body of water:

(1) Identification of significant sources (or categories) of nonpoint pollution that may impact a high quality water body by releasing the pollutants of concern;

(2) Identification of reasonable and cost-effective best management practices (BMPs) for each of these significant nonpoint sources or source categories; and

(3) Determination that significant nonpoint sources in those nonpoint source categories will implement appropriate BMPs.

(g) In addition to the State-adopted use designations, the following water body in Kansas is designated for expected aquatic life use.

Stream segment name	HUC8	Lattitude/longitude		Segment No.
		Lower	Upper	
Basin; Missouri				
Subbasin; Independence-Sugar				
WHISKEY CREEK	10240011	39.54 95.11	39.53 95.11	235 00.00

(h) In addition to the State adopted use designations, the following water body segments and lakes in Kansas are designated for primary contact recreational use.

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Basin: Cimarron						
Subbasin: Crooked						
Remuda Creek	11040007	37.08	100.28	37.16	100.28	4
Subbasin: Upper Cimarron-Bluff						
Antelope Creek	11040008	37.09	99.91	37.25	99.98	16
Bear Creek	11040008	37.05	99.71	37.3	99.79	18
Big Sandy Creek	11040008	37.04	99.76	37.06	99.81	6
Big Sandy Creek	11040008	37.06	99.81	37.07	99.83	7
Big Sandy Creek	11040008	37.07	99.83	37.21	100.34	9
Bullard Creek	11040008	37.06	99.81	37.11	100.21	10
Day Creek	11040008	37.07	99.61	37.27	99.67	20
Gyp Creek	11040008	37.17	100.07	37.37	100.11	25
Indian Creek	11040008	37.16	100.05	37.35	100.01	14
Kiger Creek	11040008	37.07	99.83	37.35	99.95	8
Kiowa Creek	11040008	37.18	99.47	37.49	99.43	12
Snake Creek	11040008	37.06	99.61	36.99	99.68	21
Stink Creek	11040008	37.04	99.79	37	99.87	17
Trout Creek	11040008	37.05	99.55	37.02	99.59	19
Twomile Creek	11040008	37.13	100.01	37.14	100.16	15
Subbasin: Lower Cimarron-Eagle Chief						
Anderson Creek	11050001	36.99	99.36	37.02	99.33	39
Keno Creek	11050001	36.97	99.29	37	99.29	22
West Creek	11050001	36.98	99.42	37.08	99.35	24
Basin: Kansas/Lower Republican						
Subbasin: Middle Republican						
Advent Creek	10250016	40.01	98.4	39.99	98.4	64
Antelope Creek	10250016	39.9	98.26	39.98	98.31	65
Ash Creek	10250016	39.88	98.44	39.99	98.49	65
Ayres Creek	10250016	40.01	98.29	39.98	98.31	70
Bean Creek	10250016	39.9	97.92	39.94	98.02	76
Burr Oak Creek	10250016	39.87	98.31	39.99	98.45	48
Calumet Creek	10250016	40.01	98.97	39.99	98.98	54
Cedar Creek	10250016	40.02	98.52	40	98.51	63
Cora Creek	10250016	39.9	98.56	39.94	98.72	51
Crow Creek (Crystal Creek)	10250016	40	99.16	39.93	99.24	52
Dry Creek	10250016	39.84	97.83	39.9	97.71	80
Korb Creek	10250016	39.9	98.21	39.97	98.24	72
Lohff Creek	10250016	40.01	98.83	39.98	98.83	56
Long Branch	10250016	39.9	98.24	39.98	98.28	68
Lost Creek	10250016	40	99.02	39.96	99.01	53
Louisa Creek	10250016	40.02	98.58	39.98	98.58	61
Norway Creek	10250016	39.9	98.16	39.97	98.2	73
Oak Creek	10250016	40.02	98.21	39.96	98.21	75
Otter Creek	10250016	39.91	97.84	40.01	97.77	79
Rankin Creek	10250016	40.01	98.35	39.98	98.35	69
Rebecca Creek	10250016	40.01	99.1	39.96	99.15	39
Rock Creek	10250016	40.01	98.77	39.98	98.77	57
Spring Creek	10250016	39.9	98.19	39.85	98.22	71
Spring Creek	10250016	39.94	97.86	39.96	97.99	78
State Creek	10250016	40.07	98.59	40	98.61	62

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Taylor Creek	10250016	39.9	98.16	39.97	98.19	74
Walnut Creek	10250016	40.01	98.69	39.97	98.81	40
Walnut Creek	10250016	39.88	98.29	39.99	98.37	46
White Rock Creek, North Branch	10250016	39.88	98.48	39.98	98.58	60
Wolf Creek	10250016	39.89	98.28	39.94	98.32	67
,						
Subbasin: Lower Republican						
Beaver Creek	10250017	39.71	97.8	39.86	97.92	45
Beaver Creek	10250017	39.56	97.38	39.48	97.43	61
Buffalo Creek	10250017	39.59	97.71	39.62	97.87	29
Buffalo Creek, EAST	10250017	39.67	98.14	39.82	98.14	68
Cheyenne Creek	10250017	39.61	97.86	39.51	97.91	55
Coal Creek	10250017	39.68	97.56	39.79	97.55	47
Cool Creek	10250017	39.59	97.64	39.67	97.67	50
Dry Creek	10250017	39.64	98.13	39.67	98.21	43
East Creek	10250017	39.66	97.56	39.82	97.51	21
Elk Creek, West Fork	10250017	39.63	97.42	39.78	97.45	16
Elm Creek, East Branch	10250017	39.53	97.46	39.41	97.52	62
Elm Creek, West Branch	10250017	39.51	97.53	39.43	97.6	59
Finney Creek	10250017	39.36	97.11	39.46	97.05	64
Gar Creek	10250017	39.56	97.26	39.75	97.34	12
Hay Creek	10250017	39.59	97.67	39.68	97.69	49
Lincoln Creek	10250017	39.33	97.08	39.43	97.01	65
Lost Creek	10250017	39.59	97.66	39.51	97.68	57
Marsh Creek	10250017	39.71	97.94	39.86	97.97	35
Marsh Creek, EAST	10250017	39.74	97.95	39.84	98.09	42
Marsh Creek, WEST	10250017	39.71	97.94	39.81	98.11	36
Millers Creek	10250017	39.46	97.23	39.4	97.52	40
Mud Creek	10250017	39.55	97.34	39.49	97.36	63
Oak Creek	10250017	39.67	97.8	39.7	97.85	48
Oak Creek	10250017	39.58	97.57	39.43	97.65	58
Peel Creek	10250017	39.51	97.23	39.79	97.2	10
Plum Creek	10250017	39.58	97.56	39.5	97.59	60
Riley Creek	10250017	39.73	97.59	39.89	97.65	24
Salt Creek, West	10250017	39.65	97.56	39.9	97.7	25
Spring Creek	10250017	39.65	98.07	39.76	98.11	44
Spring Creek	10250017	39.58	97.19	39.66	97.18	53
Turkey Creek	10250017	39.7	97.54	39.73	97.49	51
Upton Creek	10250017	39.61	97.49	39.7	97.5	52
Whites Creek	10250017	39.59	97.8	39.47	97.87	54
Wolf Creek, West Branch	10250017	39.54	97.73	39.47	97.81	56
Subbasin: Upper Kansas						
Davis Creek	10270101	38.96	96.75	38.85	96.65	18
Dry Creek	10270101	38.99	96.74	38.87	96.6	19
Humbolt Creek	10270101	39.05	96.73	38.89	96.54	10
Kitten Creek	10270101	39.21	96.7	39.27	96.69	14
Little Arkansas Creek	10270101	39.24	96.77	39.29	96.85	13
Little Kitten Creek	10270101	39.18	96.62	39.23	96.64	16
Mulberry Creek	10270101	38.83	96.82	38.75	96.79	20
Ralls Creek	10270101	38.86	96.79	38.8	96.74	21
Sevenmile Creek	10270101	39.13	96.65	39.21	96.82	5
Swede Creek	10270101	39.03	96.6	39.08	96.56	17
Subbasin: Middle Kansas						
Adams Creek	10270102	39.27	96.25	39.42	96.32	53
Bartlett Creek	10270102	39.32	96.06	39.4	96.11	55
*Big Elm Creek	10270102	39.27	95.76	39.35	95.73	90
Blackjack Creek	10270102	39.19	96.42	39.24	96.41	64
Blacksmith Creek	10270102	39.06	95.84	38.98	95.85	102
Bourbonais Creek	10270102	39.12	96.02	39.27	96.08	63
Brush Creek	10270102	39.26	96.34	39.38	96.33	57
Coal Creek	10270102	39.53	96.1	39.64	96.14	46
Coryell Creek	10270102	39.21	95.95	39.25	95.92	94
Cow Creek	10270102	39.51	96.13	39.46	96.1	45
*Crow Creek	10270102	39.32	95.91	39.41	95.85	86
Darnells Creek	10270102	39.4	96.4	39.44	96.32	51
Dog Creek	10270102	39.07	96.11	39.02	96.07	78
Doyle Creek	10270102	39.15	96.05	39.27	96.09	69

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Dry Creek	10270102	39.07	96.02	39	96.03	79
*Dutch Creek	10270102	39.24	95.88	39.31	95.82	92
Elm Creek	10270102	39.16	95.59	39.2	95.66	98
Elm Creek	10270102	39.08	95.53	39.14	95.55	103
Elm Slough	10270102	39.25	96.33	39.21	96.39	58
Emmons Creek	10270102	39.16	96.38	39.09	96.4	66
French Creek	10270102	39.5	96.15	39.64	96.17	19
Gilson Creek	10270102	39.58	96.22	39.62	96.23	47
Hendricks Creek	10270102	39.03	96.27	39.07	96.4	73
Hise Creek	10270102	39.48	96.16	39.52	96.28	43
Indian Creek	10270102	39.33	96.22	39.48	96.3	20
*James Creek	10270102	39.26	95.89	39.33	95.82	87
Jim Creek	10270102	39.39	96.18	39.48	96.27	52
Johnson Creek	10270102	38.96	96.02	39.01	96.06	84
Kuenzli Creek	10270102	39.06	96.2	38.94	96.13	82
Little Cross Creek	10270102	39.28	96.03	39.42	95.98	61
Little Muddy Creek	10270102	39.09	95.6	39.17	95.64	99
Loire Creek	10270102	38.98	96.33	39.06	96.4	80
Lost Creek	10270102	39.19	96.16	39.34	96.16	60
Messhoss Creek	10270102	39.11	95.77	39.19	95.74	96
Mud Creek	10270102	39.55	96.21	39.57	96.26	44
Mud Creek	10270102	39.32	96.47	39.34	96.53	56
Muddy Creek, West Fork	10270102	39.22	95.62	39.3	95.71	93
Mulberry Creek	10270102	39.6	96.2	39.65	96.22	42
Mulberry Creek	10270102	39.07	96.14	39.12	96.25	77
Nehring Creek	10270102	38.95	96.24	38.89	96.11	81
Paw Paw Creek	10270102	39.05	96.23	39.11	96.3	75
Pomeroy Creek	10270102	39.34	96.21	39.35	96.16	59
Post Creek	10270102	39.09	95.91	39.01	95.98	101
Pretty Creek	10270102	39.05	96.25	39.08	96.32	74
Rock Creek	10270102	39.21	96.23	39.24	96.25	15
Rock Creek	10270102	39.24	96.25	39.27	96.4	21
Rock Creek	10270102	39.27	96.4	39.4	96.51	23
Rock Creek, East Fork	10270102	39.27	96.4	39.49	96.32	22
Ross Creek	10270102	38.99	95.94	38.98	95.98	35
Salt Creek	10270102	39.24	95.97	39.3	95.95	88
Sand Creek	10270102	39.19	96.46	39.23	96.45	65
Shunganunga Creek, South Branch	10270102	39.02	95.71	38.94	95.7	106
Snake Creek	10270102	39.16	95.96	39.21	96.01	95
Snokomo Creek	10270102	39.06	96.15	38.95	96.12	85
Spring Creek	10270102	39.52	96.11	39.46	96.07	48
Spring Creek	10270102	39.41	96.17	39.36	96.14	54
Spring Creek	10270102	39.06	96.19	39.1	96.23	76
Spring Creek	10270102	39.06	95.46	39.02	95.5	105
Sullivan Creek	10270102	39.25	95.99	39.34	95.96	89
Tecumseh Creek	10270102	39.05	95.57	38.96	95.56	107
Turkey Creek	10270102	39.12	96.04	39.12	96.16	71
Unnamed Stream	10270102	39.18	95.8	39.24	95.8	8
Vassar Creek	10270102	39.08	95.91	39	95.96	100
*Walnut Creek	10270102	39.16	95.86	39.28	95.81	91
Wells Creek	10270102	39.19	96.17	39.13	96.27	68
Whetstone Creek	10270102	39.06	95.53	38.99	95.55	104
Wilson Creek	10270102	39.34	96.43	39.47	96.45	50
Wolf Creek	10270102	39.55	96.04	39.6	96	49
Subbasin: Delaware						
Banner Creek	10270103	39.47	95.72	39.44	95.87	45
Barnes Creek	10270103	39.69	95.86	39.69	95.94	39
*Bills Creek	10270103	39.47	95.65	39.41	95.79	47
Brush Creek	10270103	39.64	95.43	39.63	95.4	44
Brush Creek	10270103	39.34	95.45	39.35	95.36	54
Burr Oak Branch	10270103	39.22	95.34	39.19	95.31	8
Catamount Creek	10270103	39.42	95.52	39.39	95.57	49
Cedar Creek, North	10270103	39.34	95.56	39.39	95.7	46
Claywell Creek	10270103	39.18	95.53	39.23	95.53	56
Clear Creek	10270103	39.62	95.52	39.66	95.38	19
Coal Creek	10270103	39.38	95.49	39.5	95.43	50
Grasshopper Creek	10270103	39.56	95.53	39.62	95.52	18
Grasshopper Creek	10270103	39.62	95.52	39.76	95.63	20
*Gregg Creek	10270103	39.68	95.66	39.88	95.86	24
Honey Creek	10270103	39.24	95.31	39.3	95.28	55

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Little Grasshopper Creek	10270103	39.54	95.52	39.64	95.33	16
Little Wild Horse Creek	10270103	39.08	95.4	39.17	95.34	57
Mission Creek	10270103	39.65	95.52	39.71	95.53	40
Mosquito Creek	10270103	39.55	95.7	39.67	95.96	42
Nebo Creek	10270103	39.45	95.54	39.43	95.65	48
Negro Creek	10270103	39.54	95.53	39.59	95.64	43
Otter Creek	10270103	39.63	95.52	39.71	95.44	41
*Plum Creek	10270103	39.69	95.69	39.81	95.77	36
Rock Creek	10270103	39.17	95.52	39.29	95.61	34
Rock Creek	10270103	39.32	95.44	39.33	95.34	53
*Squaw Creek	10270103	39.71	95.67	39.79	95.69	38
Straight Creek	10270103	39.48	95.55	39.57	95.86	28
Tick Creek	10270103	39.2	95.55	39.27	95.55	52
Unnamed Stream	10270103	39.48	95.76	39.47	95.82	31
Walnut Creek	10270103	39.35	95.46	39.4	95.34	51
Wolfley Creek	10270103	39.64	95.76	39.76	95.91	27
Subbasin: Lower Kansas						
Baldwin Creek	10270104	39.01	95.27	38.97	95.36	69
Brush Creek	10270104	39.25	95.08	39.29	95.06	49
Brush Creek, WEST	10270104	39.31	95.11	39.33	95.19	46
Buttermilk Creek	10270104	39.36	95.11	39.38	95.19	44
Camp Creek	10270104	39.48	95.23	39.57	95.29	41
Camp Creek	10270104	38.96	94.92	38.88	94.92	74
Captain Creek	10270104	38.97	95.04	38.76	95.13	72
Chicken Creek	10270104	38.87	95.34	38.81	95.33	79
Clear Creek	10270104	39.02	94.82	38.97	94.89	383
Cow Creek	10270104	39.03	95.1	39.08	95.1	58
Crooked Creek	10270104	39.46	95.19	39.43	95.24	10
Crooked Creek	10270104	39.43	95.24	39.3	95.3	12
Dawson Creek	10270104	39.33	95.11	39.35	95.21	45
Elk Creek	10270104	38.89	95.48	38.78	95.54	68
Fall Creek	10270104	39.23	95.07	39.23	95.13	52
Hanson Creek	10270104	38.96	94.97	38.96	94.98	436
Hanson Creek	10270104	38.96	94.98	38.94	95.01	437
Hog Creek	10270104	39.13	95.01	39.09	94.96	54
Howard Creek	10270104	39.41	95.24	39.36	95.22	43
Hulls Branch	10270104	39.4	95.26	39.34	95.24	42
Indian Creek	10270104	39.29	95.2	39.35	95.22	48
Jarbalo Creek	10270104	39.19	95.05	39.19	95.14	51
Kent Creek	10270104	38.97	95.12	39.02	95.15	73
Kill Creek	10270104	38.98	94.96	38.82	94.97	37
Little Cedar Creek	10270104	38.92	94.89	38.85	94.83	76
Little Mill Creek	10270104	39.01	94.82	38.95	94.75	78
Little Turkey Creek	10270104	39.06	94.77	39.12	94.84	62
Little Wakarusa Creek	10270104	38.93	95.14	38.82	95.12	71
Mission Creek, East	10270104	39.06	94.83	39.12	94.85	61
Ninemile Creek	10270104	39.01	95.03	39.1	95.16	15
Ninemile Creek	10270104	39.1	95.16	39.2	95.22	17
Oakley Creek	10270104	39.04	95.36	38.99	95.36	56
Plum Creek	10270104	39.1	95.26	39.16	95.25	50
Prairie Creek	10270104	39.25	95.2	39.21	95.22	47
Rock Creek	10270104	38.87	95.43	38.77	95.53	35
Scatter Creek	10270104	39.28	95.17	39.25	95.25	13
Spoon Creek	10270104	38.92	94.98	38.81	95.01	75
Stone Horse Creek	10270104	39.03	95.33	39.15	95.32	57
Stranger Creek	10270104	39.1	95.02	39.23	95.07	7
Stranger Creek	10270104	39.28	95.11	39.46	95.19	8
Stranger Creek	10270104	39.46	95.19	39.57	95.38	9
Tonganoxie Creek	10270104	39.1	95.02	39.2	95.19	14
Tooley Creek	10270104	39.05	94.78	39.04	94.78	379
Turkey Creek	10270104	39.08	94.62	38.97	94.72	77
Unnamed Stream	10270104	39.43	95.24	39.43	95.31	11
Unnamed Stream	10270104	39.1	95.16	39.15	95.14	16
Wakarusa River, Middle Branch	10270104	38.9	95.85	38.93	95.92	64
Wakarusa River, South Branch	10270104	38.89	95.82	38.89	96.03	63
Washington Creek	10270104	38.92	95.29	38.8	95.41	36
Yankee Tank Creek	10270104	38.92	95.27	38.97	95.35	70
Subbasin: Lower Big Blue						
Ackerman Creek	10270205	39.7	96.36	39.82	96.35	49

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Black Vermillion River, Clear Fork	10270205	39.65	96.48	39.52	96.31	9
Black Vermillion River, North Fork	10270205	39.72	96.33	39.93	96.34	15
Black Vermillion River, South Fork	10270205	39.7	96.38	39.55	96.31	12
Bluff Creek	10270205	39.54	96.55	39.49	96.44	K37
Bommer Creek	10270205	39.93	96.62	39.93	96.56	40
Busksnort Creek	10270205	39.48	96.49	39.49	96.53	K33
Carter Creek	10270205	39.55	97.02	39.62	97	59
Cedar Creek	10270205	39.67	96.45	39.64	96.37	56
Corndodger Creek	10270205	39.62	96.53	39.72	96.55	52
De Shazer Creek	10270205	39.65	96.49	39.57	96.46	55
Deadman Creek	10270205	39.5	96.99	39.61	96.98	60
Deer Creek	10270205	39.9	96.65	40	96.67	36
Dog Walk Creek	10270205	39.75	96.46	39.74	96.53	53
Dutch Creek	10270205	39.78	96.68	39.81	96.74	44
Elm Creek	10270205	39.68	96.63	39.78	96.57	46
Elm Creek, North	10270205	39.97	96.6	39.95	96.46	41
Fancy Creek, North Fork	10270205	39.49	96.88	39.62	96.93	61
Fancy Creek, West	10270205	39.47	96.76	39.63	97.06	29
Game Fork	10270205	39.62	96.58	39.59	96.7	54
Hop Creek	10270205	39.8	96.68	39.87	96.78	43
Indian Creek	10270205	39.93	96.72	40.01	96.7	37
Jim Creek	10270205	39.62	96.44	39.61	96.36	57
Johnson Fork	10270205	39.66	96.47	39.73	96.54	51
Kearney Branch	10270205	39.64	96.32	39.65	96.25	58
Lily Creek	10270205	39.82	96.6	39.87	96.58	39
Little Indian Creek	10270205	39.95	96.77	40.02	96.75	35
Little Timber Creek	10270205	39.7	96.41	39.82	96.36	48
Meadow Creek	10270205	39.94	96.75	40	96.74	34
Mission Creek	10270205	40	96.6	40	96.46	22
Murdock Creek	10270205	40	96.46	39.97	96.4	42
Otter Creek	10270205	39.47	96.83	39.39	96.93	67
Otter Creek, North	10270205	39.47	96.77	39.58	96.82	62
Perkins Creek	10270205	39.76	96.46	39.76	96.56	47
Phiel Creek	10270205	39.25	96.59	39.24	96.65	68
Raemer Creek	10270205	39.9	96.7	39.88	96.78	33
Robidoux Creek	10270205	39.69	96.44	39.99	96.36	16
Schell Creek	10270205	39.82	96.62	39.78	96.59	45
School Branch	10270205	39.47	96.82	39.57	96.85	63
Scotch Creek	10270205	39.9	96.63	39.91	96.57	38
Spring Creek	10270205	39.83	96.66	39.93	96.47	19
Spring Creek	10270205	39.55	96.59	39.43	96.53	65
Timber Creek	10270205	39.54	96.62	39.59	96.67	64
Weyer Creek	10270205	39.77	96.24	39.74	96.11	50
Subbasin: Upper Little Blue						
Dry Creek	10270206	40.01	97.68	39.97	97.71	41
Subbasin: Lower Little Blue						
Ash Creek	10270207	39.81	97.04	39.75	97.14	36
Beaver Creek	10270207	39.79	96.88	39.72	96.96	38
Bolling Creek	10270207	39.74	96.82	39.81	96.83	42
Bowman Creek	10270207	39.87	97.24	40	97.32	21
Buffalo Creek	10270207	39.84	97.14	39.78	97.19	32
Camp Creek	10270207	39.81	97.06	39.76	97.15	35
Camp Creek	10270207	39.66	96.81	39.71	96.95	44
Cedar Creek	10270207	39.86	96.89	39.86	96.82	40
Cherry Creek	10270207	39.85	97.35	39.94	97.44	25
Coon Creek	10270207	39.7	96.76	39.7	97.07	23
Fawn Creek	10270207	39.69	96.7	39.61	96.74	45
Gray Branch	10270207	39.86	97.23	39.99	97.25	27
Humphrey Branch	10270207	40.01	97.44	39.98	97.41	24
Iowa Creek	10270207	39.86	97.2	39.8	97.26	34
Joy Creek	10270207	39.94	96.97	40.01	97.12	13
Jones Creek	10270207	39.87	97.22	39.95	97.23	29
Lane Branch	10270207	39.81	96.89	39.84	96.97	39
Malone Creek	10270207	39.78	96.87	39.73	96.92	37
Melvin Creek	10270207	39.85	97.16	39.79	97.2	33
Mercer Creek	10270207	39.75	96.83	39.72	96.89	43
Mill Creek, South Fork	10270207	39.85	97.33	39.85	97.52	31
Myer Creek	10270207	39.86	97.29	39.99	97.35	26

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Riddle Creek	10270207	39.84	97.13	40	97.2	17
Rose Creek	10270207	40	97.51	39.97	97.71	12
Salt Creek	10270207	39.85	97.18	39.99	97.21	19
School Creek	10270207	40	97.01	40	97.03	49
Silver Creek	10270207	40.02	97.23	39.99	97.23	28
Spring Creek	10270207	39.89	97.01	40	97.13	15
Spring Creek	10270207	39.91	97.1	39.96	97.11	30
Walnut Creek	10270207	39.72	96.77	39.86	96.79	41
Basin: Lower Arkansas Subbasin: Rattlesnake						
Bear Creek	11030009	38.05	98.82	37.98	98.9	8
Little Wild Horse Creek	11030009	38.04	98.84	37.95	98.97	6
Spring Creek	11030009	37.97	98.81	37.92	98.91	7
Wildhorse Creek	11030009	38.06	98.74	37.95	99.05	2
Subbasin: Gar-Peace						
Gar Creek	11030010	37.9	97.69	37.86	97.83	8
Subbasin: Cow						
Blood Creek	11030011	38.48	98.7	38.59	99.04	15
Calf Creek	11030011	38.44	98.43	38.59	98.48	16
Deception Creek	11030011	38.48	98.68	38.65	98.79	13
Dry Creek	11030011	38.24	98.09	38.37	98.08	22
Jarvis Creek	11030011	38.27	98.12	38.4	98.12	19
Little Cheyenne Creek	11030011	38.45	98.48	38.44	98.63	7
Little Cow Creek	11030011	38.31	98.19	38.55	98.24	2
Lost Creek	11030011	38.42	98.33	38.61	98.3	17
Owl Creek	11030011	38.31	98.18	38.43	98.16	18
Plum Creek	11030011	38.44	98.36	38.62	98.51	4
Salt Creek	11030011	38.31	98.21	38.39	98.18	21
Spring Creek	11030011	38.35	98.29	38.32	98.42	20
Subbasin: Little Arkansas						
Beaver Creek	11030012	38.11	97.32	38.14	97.24	26
Bull Creek	11030012	38.35	97.65	38.43	97.67	24
Dry Creek	11030012	38.34	97.97	38.35	98.05	22
Emma Creek	11030012	37.94	97.44	38	97.45	6
Emma Creek	11030012	38	97.45	38.27	97.36	7
Emma Creek, West	11030012	38	97.45	38.37	97.4	8
Gooseberry Creek	11030012	37.91	97.35	37.95	97.3	17
Horse Creek	11030012	38.42	98.02	38.52	98.08	19
Jester Creek	11030012	37.85	97.4	38.06	97.28	2
Jester Creek, East Fork	11030012	37.97	97.32	38.05	97.28	18
Kisiwa Creek	11030012	37.96	97.47	38.02	97.79	15
Lone Tree Creek	11030012	38.27	97.92	38.41	97.91	20
Mud Creek	11030012	37.98	97.39	38.08	97.36	16
Running Turkey Creek	11030012	38.27	97.62	38.42	97.47	25
Salt Creek	11030012	38.35	97.97	38.43	97.96	21
Sun Creek	11030012	38.12	97.6	38.25	97.65	11
Sun Creek	11030012	38.25	97.65	38.45	97.58	13
Turkey Creek	11030012	38.25	97.65	38.45	97.55	12
Subbasin: Middle Arkansas-Slate						
Antelope Creek	11030013	37.21	97.27	37.3	97.32	25
Badger Creek	11030013	37.18	97.23	37.13	97.28	31
Beaver Creek	11030013	37.23	97.38	37.32	97.34	29
Beaver Creek	11030013	37.16	97.1	37.25	97.07	33
Big Slough	11030013	37.6	97.39	37.78	97.73	11
Big Slough, South Fork	11030013	37.83	97.6	37.77	97.72	35
Bitter Creek	11030013	37.41	97.2	37.48	97.16	28
Dry Creek	11030013	37.72	97.49	37.7	97.55	15
Dry Creek	11030013	37.61	97.41	37.66	97.55	16
Gypsum Creek	11030013	37.64	97.31	37.75	97.23	5
Hargis Creek	11030013	37.23	97.39	37.34	97.35	24
Lost Creek	11030013	37.26	97.16	37.27	97.18	23
Negro Creek	11030013	37.08	97.09	37.04	97.14	20
Oak Creek	11030013	37.28	97.43	37.36	97.41	26

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Salt Creek	11030013	37.11	97.13	37.09	97.24	22
Spring Creek	11030013	37.08	97.09	37.07	97.17	19
Spring Creek	11030013	37.1	97.1	37.13	97.05	21
Spring Creek	11030013	37.3	97.46	37.4	97.5	27
Spring Creek	11030013	37.21	97.15	37.36	97.1	34
Spring Creek	11030013	37.51	97.27	37.61	97.18	37
Winser Creek	11030013	37.19	97.23	37.29	97.27	32
Subbasin: North Fork Ninnescah						
Crow Creek	11030014	37.85	97.92	37.92	97.93	11
Dooleyville Creek	11030014	37.91	98.52	37.96	98.64	8
Goose Creek	11030014	37.83	98.18	37.71	98.35	10
Ninnescah River, North Fork	11030014	37.57	97.71	37.73	97.79	1
Ninnescah River, North Fork	11030014	37.82	97.9	37.84	98.15	5
Ninnescah River, North Fork	11030014	37.84	98.15	37.84	98.75	6
Red Rock Creek	11030014	37.87	97.99	37.97	98.1	12
Rock Creek	11030014	37.7	97.78	37.78	97.74	13
Silver Creek	11030014	37.84	98.15	37.76	98.59	7
Spring Creek	11030014	37.62	97.74	37.76	97.71	14
Wolf Creek	11030014	37.83	98.32	37.83	98.41	9
Subbasin: South Fork Ninnescah						
Coon Creek	11030015	37.66	98.53	37.61	98.58	9
Coon Creek	11030015	37.55	97.9	37.53	98	17
Hunter Creek	11030015	37.64	98.08	37.55	98.2	14
Mead Creek	11030015	37.63	98.33	37.56	98.37	10
Mod Creek	11030015	37.57	97.72	37.54	97.8	19
Natrona Creek	11030015	37.66	98.63	37.72	98.69	K38
Negro Creek	11030015	37.63	98.05	37.57	98.08	13
Nester Creek	11030015	37.6	97.81	37.7	97.87	15
Ninnescah River, West Branch South Fork	11030015	37.64	98.77	37.62	98.95	5
Painter Creek	11030015	37.64	98.34	37.57	98.65	7
Pat Creek	11030015	37.63	98.31	37.56	98.33	11
Petyt Creek	11030015	37.63	98.23	37.56	98.29	12
Sand Creek	11030015	37.59	97.95	37.55	98.1	18
Spring Creek	11030015	37.7	97.98	37.78	98	8
Wild Run Creek	11030015	37.62	98.2	37.54	98.22	16
Subbasin: Ninnescah						
Afton Creek	11030016	37.6	97.64	37.61	97.63	5
Clearwater Creek	11030016	37.55	97.63	37.6	97.64	4
Clearwater Creek	11030016	37.6	97.64	37.72	97.66	7
Dry Creek	11030016	37.51	97.42	37.59	97.46	16
Elm Creek	11030016	37.43	97.38	37.41	97.47	10
Garvey Creek	11030016	37.47	97.43	37.42	97.46	11
Sand Creek	11030016	37.54	97.69	37.5	97.93	14
Silver Creek	11030016	37.47	97.47	37.42	97.53	12
Spring Creek	11030016	37.46	97.38	37.58	97.53	2
Spring Creek	11030016	37.51	97.56	37.62	97.58	15
Turtle Creek	11030016	37.48	97.49	37.43	97.53	13
Subbasin: Kaw Lake						
Blue Branch	11060001	37.3	96.69	37.34	96.72	30
Bullington Creek	11060001	37.23	96.71	37.26	96.61	28
Cedar Creek	11060001	37.31	96.68	37.4	96.53	32
Chilocco Creek	11060001	36.98	97.06	37.05	97.16	19
Crabb Creek	11060001	37.13	96.78	37.19	96.61	29
Ferguson Creek	11060001	37.46	96.57	37.45	96.52	38
Franklin Creek	11060001	37.45	96.58	37.5	96.61	35
Gardners Branch	11060001	37.39	96.63	37.39	96.56	39
Goose Creek	11060001	37.39	96.64	37.46	96.64	34
Myers Creek	11060001	36.97	96.81	37.03	96.74	24
Otter Creek	11060001	37.02	96.9	37.05	96.83	20
Pebble Creek	11060001	37.18	96.85	37.23	96.77	26
Plum Creek	11060001	37.28	96.78	37.32	96.73	33
Riley Creek	11060001	37.46	96.57	37.47	96.51	37
School Creek	11060001	37.26	96.69	37.29	96.63	31
Shellrock Creek	11060001	37.01	96.81	37.07	96.75	22
Silver Creek	11060001	37.06	96.87	37.34	96.76	17

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Snake Creek	11060001	37.22	96.83	37.31	96.82	25
Spring Creek	11060001	36.97	96.7	37.08	96.72	21
Turkey Creek	11060001	37.2	96.71	37.26	96.75	27
Wagoner Creek	11060001	37.47	96.56	37.52	96.5	36
Subbasin: Upper Salt Fork Arkansas						
Ash Creek	11060002	37.15	98.99	37.2	98.93	20
Big Sandy Creek	11060002	37.03	98.86	37.24	98.88	5
Cave Creek	11060002	37.07	98.97	37.02	99.05	28
Deadman Creek	11060002	37.13	98.85	37.24	98.9	22
Dog Creek	11060002	37.12	99.08	37.17	99.11	29
Hackberry Creek	11060002	36.98	98.81	37.16	98.8	23
Indian Creek	11060002	37.12	99.04	37.28	99.16	9
Inman Creek	11060002	37.19	99	37.27	98.94	21
Mustang Creek	11060002	37.09	99.14	36.97	99.19	31
Nescatunga Creek, East Branch	11060002	37.18	99.21	37.3	99.21	27
Red Creek	11060002	37.11	99.05	36.98	99.11	16
Spring Creek	11060002	37.32	99.12	37.39	99.16	24
Wildcat Creek	11060002	37.12	99.09	37.22	99.13	12
Yellowstone Creek	11060002	36.99	98.84	36.98	98.86	17
Subbasin: Medicine Lodge						
Amber Creek	11060003	37.38	98.59	37.49	98.64	12
Antelope Creek	11060003	37.24	98.56	37.31	98.51	22
Bear Creek	11060003	37.36	98.88	37.3	98.99	13
Bitter Creek	11060003	37.31	98.73	37.24	98.79	18
Cedar Creek	11060003	37.28	98.63	37.2	98.8	20
Cottonwood Creek	11060003	37.36	98.85	37.43	98.85	16
Crooked Creek	11060003	37.41	98.65	37.5	98.67	11
Litle Mule Creek	11060003	36.93	98.52	37.19	98.77	9
Dry Creek	11060003	37.14	98.66	37.19	98.74	21
Elm Creek, East Branch South	11060003	37.43	98.77	37.54	98.83	10
Elm Creek, North Branch	11060003	37.43	98.68	37.56	98.78	4
Elm Creek, South Branch	11060003	37.43	98.68	37.56	98.89	5
Little Bear Creek	11060003	37.31	98.76	37.22	98.81	19
Medicine Lodge River, North Branch	11060003	37.45	99.2	37.53	99.28	24
Mulberry Creek	11060003	37.37	98.89	37.5	98.89	14
Otter Creek	11060003	37.43	99.12	37.39	99.16	25
Puckett Creek	11060003	37.35	98.84	37.31	98.87	15
Sand Creek	11060003	37.33	98.76	37.4	98.75	17
Soldier Creek	11060003	37.44	99.04	37.61	99.04	27
Stink Creek	11060003	36.94	98.43	37.05	98.53	28
Turkey Creek	11060003	37.37	98.92	37.6	98.99	7
Wilson Slough	11060003	37.17	98.54	37.23	98.52	23
Subbasin: Lower Salt Fork Arkansas						
Camp Creek	11060004	37.13	98.24	37.27	98.25	68
Cooper Creek	11060004	36.97	98.06	37.07	98.06	71
Crooked Creek	11060004	36.97	97.93	37.04	97.92	24
Little Sandy Creek	11060004	36.96	98.27	37.37	98.49	39
Little Sandy Creek, East Branch	11060004	37.24	98.41	37.37	98.5	65
Osage Creek	11060004	36.9	97.79	37	97.8	17
Plum Creek	11060004	37.06	98.22	37.14	98.18	70
Pond Creek	11060004	36.98	97.87	37.04	97.89	18
Rush Creek	11060004	36.98	98.19	37.01	98.12	69
Salty Creek	11060004	36.99	98.3	37.18	98.45	40
Sandy Creek	11060004	36.98	98.21	37.36	98.33	37
Sandy Creek, West	11060004	37.2	98.32	37.36	98.38	56
Spring Creek	11060004	37.16	98.35	37.31	98.38	66
Unnamed Stream	11060004	36.97	97.96	37.03	97.99	25
Subbasin: Chikaskia						
Allen Creek	11060005	37.47	98.28	37.55	98.36	40
Baehr Creek	11060005	37.08	97.86	37.22	97.9	22
Beaver Creek	11060005	37.2	97.63	37.35	97.62	28
Beaver Creek	11060005	37.12	98.06	37.17	98.17	46
Big Spring Creek	11060005	37.42	97.95	37.52	97.98	34
Bitter Creek	11060005	36.95	97.26	37.13	97.28	4
Bitter Creek, East	11060005	36.99	97.23	37.07	97.19	16

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Blue Stem Creek	11060005	37.45	98.01	37.53	98.04	48
Chicken Creek	11060005	37.4	98.5	37.48	98.54	36
Copper Creek	11060005	37.44	98.03	37.5	98.06	42
Dry Creek	11060005	36.95	97.34	37.01	97.3	17
Duck Creek	11060005	37.43	97.97	37.53	98.02	32
Fall Creek	11060005	37	97.56	37.2	97.82	14
Fall Creek, East Branch	11060005	37.09	97.69	37.18	97.7	27
Goose Creek	11060005	37.41	98.3	37.44	98.35	38
Kemp Creek	11060005	37.46	98.26	37.51	98.27	49
Long Creek	11060005	37.18	97.56	37.26	97.54	529
Meridian Creek	11060005	37	97.38	37.16	97.34	20
Prairie Creek	11060005	37.13	97.59	37.15	97.75	512
Prairie Creek, East	11060005	37.15	97.57	37.28	97.53	516
Prairie Creek, West	11060005	37.15	97.57	37.31	97.56	527
Red Creek	11060005	37.44	98.07	37.54	98.18	43
Rock Creek	11060005	37.11	97.97	37.24	97.99	23
Rodgers Branch	11060005	37.08	97.55	37.17	97.52	26
Rose Bud Creek	11060005	37.45	98.08	37.54	98.09	44
Rush Creek	11060005	37.17	98.1	37.37	98.13	45
Sand Creek	11060005	37.44	98.2	37.58	98.79	11
Sand Creek, East	11060005	37.25	97.78	37.38	98.16	12
Sandy Creek	11060005	37.34	97.86	37.45	97.85	30
Shoo Fly Creek, East	11060005	37.09	97.44	37.17	97.4	19
Shore Creek	11060005	37.24	97.68	37.37	97.67	35
Silver Creek	11060005	37.25	97.69	37.37	97.7	29
Skunk Creek	11060005	37.39	98.37	37.45	98.44	39
Spring Branch	11060005	37.07	97.83	37.2	97.85	21
Wild Horse Creek	11060005	37.44	98.16	37.55	98.2	4
Wildcat Creek	11060005	37.1	97.95	37.03	98.02	24
Basin: Marais Des Cygnes Subbasin: Upper Marais Des Cygnes						
Appanoose Creek	10290101	38.62	95.33	38.77	95.49	16
Appanoose Creek, East	10290101	38.68	95.43	38.75	95.44	89
Batch Creek	10290101	38.8	95.97	38.87	96.04	86
Blue Creek	10290101	38.6	95.35	38.63	95.4	81
Bradshaw Creek	10290101	38.21	95.25	38.15	95.28	75
Cedar Creek	10290101	38.33	95.26	38.16	95.47	66
Cherry Creek	10290101	38.24	95.47	38.22	95.53	74
Chicken Creek	10290101	38.69	96.05	38.81	96.09	70
Chicken Creek	10290101	38.52	95.67	38.57	95.68	93
Coal Creek	10290101	38.59	95.4	38.49	95.44	48
Dry Creek	10290101	38.36	95.2	38.42	95.21	57
Dry Creek	10290101	38.56	95.52	38.58	95.63	95
Duck Creek	10290101	38.54	95.95	38.64	96.16	41
Eightmile Creek	10290101	38.62	95.29	38.69	95.34	13
Frog Creek	10290101	38.52	95.61	38.36	95.81	42
Hard Fish Creek	10290101	38.59	95.47	38.52	95.47	47
Hickory Creek	10290101	38.58	95.11	38.68	95.03	8
Hill Creek	10290101	38.6	96.05	38.69	96.2	71
Iantha Creek	10290101	38.34	95.34	38.42	95.51	62
Jersey Creek	10290101	38.6	95.74	38.65	95.79	76
Kenoma Creek	10290101	38.32	95.38	38.41	95.52	64
Little Rock Creek	10290101	38.45	95.59	38.4	95.55	73
Long Creek	10290101	38.52	95.61	38.46	95.69	K36
Locust Creek	10290101	38.77	96.12	38.79	96.2	69
Middle Creek	10290101	38.57	95.13	38.48	95.44	50
Mosquito Creek	10290101	38.45	95.07	38.48	95.14	52
Mud Creek	10290101	38.57	95.33	38.54	95.39	49
Mud Creek	10290101	38.7	95.78	38.65	95.83	78
Mud Creek	10290101	38.51	95.92	38.49	96	91
Mute Creek	10290101	38.6	95.8	38.59	95.91	92
Ottawa Creek	10290101	38.59	95.16	38.63	95.19	K25
Plum Creek	10290101	38.5	94.95	38.59	94.99	2
Plum Creek	10290101	38.72	95.86	38.7	95.94	79
Popcorn Creek	10290101	38.69	95.73	38.77	95.73	87
Pottawatomie Creek, North Fork	10290101	38.32	95.38	38.35	95.58	65
Pottawatomie Creek, South Fork	10290101	38.38	95.14	38.13	95.15	67
Rock Creek	10290101	38.53	95.58	38.35	95.57	43
Rock Creek	10290101	38.6	95.23	38.53	95.34	97
Sac Branch, South Fork	10290101	38.43	95.11	38.44	95.2	54

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Sac Creek	10290101	38.34	95.3	38.47	95.44	60
Salt Creek	10290101	38.59	95.51	38.73	95.99	29
Sand Creek	10290101	38.65	95.3	38.69	95.29	82
Smith Creek	10290101	38.71	95.81	38.69	95.92	77
Spring Creek	10290101	38.69	95.34	38.71	95.39	84
Switzler Creek	10290101	38.71	95.79	38.84	95.92	80
Tauy Creek	10290101	38.59	95.16	38.83	95.27	11
Tauy Creek, West Fork	10290101	38.63	95.19	38.71	95.27	K26
Tequa Creek	10290101	38.54	95.54	38.49	95.52	44
Tequa Creek, East Branch	10290101	38.49	95.52	38.48	95.45	46
Tequa Creek, South Branch	10290101	38.49	95.52	38.42	95.51	45
Thomas Creek	10290101	38.27	95.4	38.18	95.51	72
Turkey Creek	10290101	38.58	95.09	38.59	95.08	4
Turkey Creek	10290101	38.59	95.08	38.6	95.01	6
Unnamed Stream	10290101	38.59	95.08	38.59	95.02	5
Walnut Creek	10290101	38.63	95.19	38.76	95.14	90
West Fork Eight Mile Creek	10290101	38.71	95.35	38.79	95.4	88
Willow Creek	10290101	38.51	95.59	38.43	95.63	94
Wilson Creek	10290101	38.62	95.28	38.69	95.27	83
Wolf Creek	10290101	38.52	95.62	38.58	95.65	96
Subbasin: Lower Marais Des Cygnes						
Buck Creek	10290102	38.14	94.89	38.09	94.93	44
Bull Creek	10290102	38.73	94.96	38.82	94.98	99
Davis Creek	10290102	38.25	94.88	38.32	94.95	38
Dorsey Creek	10290102	38.56	94.85	38.63	94.82	22
Elm Branch	10290102	38.71	94.8	38.69	94.74	48
Elm Branch	10290102	38.47	94.81	38.54	94.77	53
Elm Creek	10290102	38.36	94.83	38.34	94.96	40
Hushpuckney Creek	10290102	38.4	94.87	38.44	94.93	37
Jake Branch	10290102	38.5	94.71	38.55	94.71	54
Jordan Branch	10290102	38.48	94.91	38.45	94.92	36
Little Bull Creek	10290102	38.72	94.87	38.83	94.89	51
Little Sugar Creek	10290102	38.24	94.74	38.11	95.01	33
Little Sugar Creek, North Fork	10290102	38.14	94.91	38.08	94.96	43
Martin Creek	10290102	38.76	94.81	38.77	95.06	26
Middle Creek	10290102	38.49	94.75	38.52	94.63	13
Middle Creek	10290102	38.37	94.81	38.34	95.09	30
Mound Creek	10290102	38.39	94.96	38.39	95.05	35
Richland Creek	10290102	38.25	94.81	38.31	94.87	41
Rock Creek	10290102	38.7	94.99	38.78	95.07	27
Smith Branch	10290102	38.7	94.94	38.73	94.92	47
Spring Creek	10290102	38.73	94.87	38.78	94.82	50
Sugar Creek	10290102	38.2	95	38.24	95.17	42
Turkey Creek	10290102	38.24	94.85	38.19	94.91	45
Walnut Creek	10290102	38.49	94.75	38.54	94.74	14
Walnut Creek	10290102	38.12	94.6	38.11	94.67	34
Walnut Creek	10290102	38.58	94.89	38.62	94.99	52
WEA Creek, North	10290102	38.6	94.78	38.74	94.68	21
WEA Creek, South	10290102	38.55	94.86	38.56	94.85	18
WEA Creek, South	10290102	38.56	94.85	38.6	94.79	19
WEA Creek, South	10290102	38.6	94.78	38.59	94.63	20
Subbasin: Little Osage						
Clever Creek	10290103	38.02	94.76	37.95	94.79	7
Elk Creek	10290103	38.02	94.77	38.1	94.86	11
Fish Creek	10290103	38.01	94.7	37.95	94.77	8
Indian Creek	10290103	38	94.64	38.11	94.68	12
Irish Creek	10290103	38.02	94.99	38.08	94.98	9
Laberdie Creek, East	10290103	38.02	94.72	38.1	94.71	13
Limestone Creek	10290103	37.99	94.96	37.93	95.1	5
Lost Creek	10290103	38.02	94.8	38.07	94.94	10
Reagan Branch	10290103	37.98	94.94	37.94	94.95	6
Subbasin: Marmaton						
Buck Run	10290104	37.7	94.6	37.74	94.72	46
Bunion Creek	10290104	37.79	94.9	37.72	94.88	39
Cedar Creek	10290104	37.82	94.79	37.87	94.84	41
Drywood Creek, Moores Branch	10290104	37.77	94.53	37.79	94.7	17
Drywood Creek, West Fork	10290104	37.7	94.6	37.6	94.8	19

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Elm Creek	10290104	37.79	94.82	37.73	94.87	15
Hinton Creek	10290104	37.77	94.96	37.74	95.06	38
Lath Branch	10290104	37.85	94.66	37.82	94.68	42
Little Mill Creek	10290104	37.91	94.81	37.96	94.82	34
Mill Creek	10290104	37.85	94.7	37.93	94.92	6
Owl Creek	10290104	37.75	94.95	37.69	94.92	45
Paint Creek	10290104	37.8	94.82	37.79	94.82	13
Paint Creek	10290104	37.79	94.82	37.7	94.97	14
Prong Creek	10290104	37.73	94.97	37.72	94.99	44
Robinson Branch	10290104	37.83	94.87	37.87	94.87	40
Shiloh Creek	10290104	37.86	94.59	37.95	94.67	36
Sweet Branch	10290104	37.87	95.11	37.92	95.11	30
Tennyson Creek	10290104	37.83	95	37.88	95.03	31
Turkey Creek	10290104	37.85	94.95	37.92	95	33
Walnut Creek	10290104	37.84	94.9	37.9	94.91	32
Walnut Creek	10290104	37.68	94.7	37.72	94.74	47
Wolfpen Creek	10290104	37.8	95.06	37.74	95.08	37
Wolverine Creek	10290104	37.87	94.68	37.93	94.72	35
Subbasin: South Grand						
Harless Creek	10290108	38.59	94.57	38.59	94.62	67
Poney Creek	10290108	38.64	94.61	38.68	94.64	48
Basin: Missouri Subbasin: Tarkio-Wolf						
Cold Ryan Branch	10240005	39.79	95.22	39.74	95.19	70
Coon Creek	10240005	39.84	95.17	39.78	95.12	71
Halling Creek	10240005	39.78	95.29	39.7	95.32	68
Mill Creek	10240005	39.95	95.25	39.86	95.29	52
Rittenhouse Branch	10240005	39.8	95.21	39.83	95.27	69
Spring Creek	10240005	39.91	95.3	39.92	95.34	65
Striker Branch	10240005	39.86	95.18	39.84	95.24	72
Wolf River, Middle Fork	10240005	39.81	95.44	39.74	95.55	67
Wolf River, North Fork	10240005	39.81	95.48	39.84	95.56	66
Wolf River, South Fork	10240005	39.81	95.38	39.65	95.34	57
Unnamed Stream	10240005	39.81	95.38	39.84	95.35	55
Subbasin: South Fork Big Nemaha						
Burger Creek	10240007	39.94	96.08	39.99	96.11	24
Deer Creek	10240007	39.92	96.03	39.93	95.85	18
Fisher Creek	10240007	39.82	96.06	39.79	96.12	28
Illinois Creek	10240007	39.78	96.05	39.68	96.05	30
Rattlesnake Creek	10240007	40.05	95.86	39.98	95.87	27
Rock Creek	10240007	40.06	95.72	39.94	95.86	20
Tennessee Creek	10240007	39.81	96.06	39.73	95.94	29
Turkey Creek	10240007	39.95	96.04	39.98	96.15	4
Turkey Creek	10240007	39.98	96.15	40.02	96.14	5
Wildcat Creek	10240007	39.88	96.04	39.83	96.16	23
Wildcat Creek	10240007	40	96.24	40	96.22	22
Wolf Pen Creek	10240007	39.92	95.99	39.96	95.91	25
Subbasin: Big Nemaha						
*Noharts Creek	10240008	40.01	95.45	39.92	95.47	42
Pedee Creek	10240008	39.98	95.68	40	95.73	41
Pony Creek	10240008	40	95.62	39.91	95.8	38
*Roys Creek	10240008	40.02	95.39	39.9	95.49	40
Subbasin: Independence-Sugar						
Brush Creek	10240011	39.67	95.03	39.75	95.07	26
Deer Creek	10240011	39.62	95.1	39.57	95.25	32
Fivemile Creek	10240011	39.3	94.9	39.3	94.97	35
Independence Creek, North Branch	10240011	39.67	95.2	39.69	95.29	29
Jordan Creek	10240011	39.66	95.19	39.74	95.15	30
Owl Creek	10240011	39.47	95.05	39.43	95.09	33
Rock Creek	10240011	39.64	95.11	39.76	95.12	21
Salt Creek	10240011	39.39	94.94	39.3	95.03	34
Smith Creek	10240011	39.85	94.94	39.84	94.97	28
Threemile Creek	10240011	39.32	94.91	39.32	94.97	36

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Walnut Creek	10240011	39.5	95.05	39.52	95.18	23
Walnut Creek	10240011	39.73	94.97	39.76	95.05	25
White Clay Creek	10240011	39.56	95.11	39.56	95.12	31
White Clay Creek	10240011	39.56	95.12	39.56	95.13	31
White Clay Creek	10240011	39.56	95.13	39.53	95.2	31
Whiskey Creek	10240011	39.54	95.11	39.53	95.11	235 00.00
Whiskey Creek	10240011	39.53	95.11	39.52	95.14	235 00.32
Subbasin: Lower Missouri-Crooked						
Brush Creek	10300101	39.02	94.62	39	94.62	54
Camp Branch	10300101	38.83	94.63	38.74	94.66	56
Coffee Creek	10300101	38.81	94.68	38.82	94.78	57
Dyke Branch	10300101	38.97	94.61	38.98	94.63	55
Indian Creek	10300101	38.94	94.61	38.9	94.76	32
Negro Creek	10300101	38.86	94.61	38.85	94.69	58
Tomahawk Creek	10300101	38.93	94.62	38.87	94.76	53
Basin: Neosho **Subbasin: Neosho Headwaters**						
Allen Creek	11070201	38.44	96.19	38.69	96.23	5
Badger Creek	11070201	38.39	96.06	38.52	96.09	45
Big John Creek	11070201	38.62	96.44	38.74	96.4	37
Bluff Creek	11070201	38.63	96.37	38.74	96.21	8
Crooked Creek	11070201	38.75	96.64	38.68	96.67	35
Dows Creek	11070201	38.43	96.16	38.44	96.19	3
Dows Creek	11070201	38.44	96.19	38.65	96.19	4
Eagle Creek	11070201	38.28	95.88	38.26	96.21	25
Eagle Creek, South	11070201	38.27	96.04	38.22	96.14	47
East Creek	11070201	38.62	96.46	38.54	96.63	39
Elm Creek	11070201	38.65	96.48	38.65	96.66	36
Fourmile Creek	11070201	38.65	96.66	38.66	96.67	24
Fourmile Creek	11070201	38.27	95.95	38.18	96.02	48
Haun Creek	11070201	38.75	96.65	38.64	96.72	29
Horse Creek	11070201	38.75	96.31	38.82	96.32	33
Kahola Creek	11070201	38.54	96.33	38.52	96.47	43
Lairds Creek	11070201	38.73	96.58	38.86	96.59	30
Lanos Creek	11070201	38.72	96.54	38.86	96.56	21
Lebo Creek	11070201	38.3	95.91	38.41	95.84	51
Munkers Creek, East Branch	11070201	38.79	96.41	38.83	96.33	31
Munkers Creek, Middle Branch	11070201	38.77	96.45	38.81	96.39	32
Neosho River, East Fork	11070201	38.73	96.5	38.83	96.35	18
Neosho River, West Fork	11070201	38.76	96.71	38.67	96.79	28
Parkers Creek	11070201	38.76	96.67	38.83	96.68	27
Plum Creek	11070201	38.34	95.98	38.43	95.96	50
Plumb Creek	11070201	38.43	96.12	38.51	96.1	49
Rock Creek	11070201	38.62	96.37	38.63	96.37	7
Rock Creek	11070201	38.63	96.37	38.81	96.2	9
Rock Creek, East Branch	11070201	38.75	96.3	38.82	96.23	34
Spring Creek	11070201	38.6	96.51	38.54	96.53	40
Stillman Creek	11070201	38.47	96.17	38.55	96.18	44
Taylor Creek	11070201	38.44	96.16	38.52	96.1	46
Walker Branch	11070201	38.59	96.4	38.57	96.46	42
Wolf Creek	11070201	38.6	96.49	38.54	96.5	41
Wrights Creek	11070201	38.55	96.35	38.64	96.28	38
Subbasin: Upper Cottonwood						
Antelope Creek	11070202	38.32	97.15	38.22	97.26	19
Bills Creek	11070202	38.15	96.8	38.08	96.87	30
Bruno Creek	11070202	38.26	96.83	38.37	96.89	27
Catlin Creek	11070202	38.27	96.97	38.24	97.15	20
Clear Creek	11070202	38.36	97.02	38.6	96.92	5
Clear Creek, East Branch	11070202	38.44	96.96	38.53	96.9	24
Coon Creek	11070202	38.24	96.81	38.22	96.69	32
Cottonwood River, South	11070202	38.36	97.07	38.32	97.15	17
Cottonwood River, South	11070202	38.32	97.15	38.41	97.34	18
Doyle Creek	11070202	38.24	96.91	38.21	97.26	21
French Creek	11070202	38.39	97.17	38.43	97.33	6
Mud Creek	11070202	38.36	97.02	38.57	97.17	6
Perry Creek	11070202	38.51	97.3	38.43	97.33	23
Spring Branch	11070202	38.31	97.02	38.25	97.16	26

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Spring Creek	11070202	38.16	97.11	38.22	97.21	28
Spring Creek	11070202	38.23	96.93	38.12	96.92	29
Stony Brook	11070202	38.31	97.26	38.24	97.31	25
Turkey Creek	11070202	38.19	96.82	38.09	96.87	31
Subbasin: Lower Cottonwood						
Beaver Creek	11070203	38.41	96.33	38.47	96.35	29
Bloody Creek	11070203	38.37	96.45	38.24	96.4	40
Buck Creek	11070203	38.37	96.53	38.32	96.61	39
Buckeye Creek	11070203	38.4	96.37	38.5	96.47	44
Bull Creek	11070203	38.39	96.38	38.46	96.45	26
Camp Creek	11070203	38.58	96.81	38.58	96.9	14
Coal Creek	11070203	38.36	96.08	38.28	96.24	43
Collett Creek	11070203	38.4	96.71	38.47	96.75	21
Corn Creek	11070203	38.17	96.55	38.16	96.5	47
Coyne Branch	11070203	38.29	96.74	38.23	96.69	33
Crocker Creek	11070203	38.18	96.56	38.15	96.64	46
Dodds Creek	11070203	38.55	96.74	38.63	96.71	15
Fox Creek	11070203	38.39	96.55	38.52	96.63	19
French Creek	11070203	38.27	96.77	38.36	96.83	32
Gannon Creek	11070203	38.42	96.65	38.48	96.59	24
Gould Creek	11070203	38.35	96.67	38.37	96.71	36
Holmes Creek	11070203	38.32	96.69	38.28	96.68	35
Jacob Creek	11070203	38.4	96.36	38.28	96.35	28
Kirk Creek	11070203	38.21	96.56	38.2	96.62	48
Little Cedar Creek	11070203	38.1	96.54	38.06	96.43	11
Little Cedar Creek	11070203	38.15	96.55	38.13	96.42	45
Middle Creek	11070203	38.38	96.63	38.55	96.89	5
Mile-and-A-Half Creek	11070203	38.56	96.77	38.66	96.8	13
Moon Creek	11070203	38.4	96.27	38.47	96.3	31
Mulvane Creek	11070203	38.44	96.66	38.5	96.64	22
Peyton Creek	11070203	38.38	96.42	38.5	96.51	25
Phenis Creek	11070203	38.39	96.26	38.28	96.3	30
Pickett Creek	11070203	38.5	96.71	38.49	96.77	18
Prather Creek	11070203	38.39	96.55	38.33	96.61	23
Rock Creek	11070203	38.26	96.54	38.18	96.65	37
Schaffer Creek	11070203	38.48	96.69	38.55	96.65	17
School Creek	11070203	38.51	96.71	38.57	96.68	16
Sharpes Creek	11070203	38.27	96.52	38.15	96.44	38
Silver Creek	11070203	38.31	96.72	38.37	96.79	34
Spring Creek	11070203	38.37	96.43	38.32	96.4	41
Stout Run	11070203	38.37	96.48	38.44	96.52	27
Stribby Creek	11070203	38.41	96.78	38.51	96.79	20
Subbasin: Upper Neosho						
Badger Creek	11070204	38.15	95.65	38.2	95.6	42
Big Creek, North	11070204	38.09	95.73	38.16	96	16
Big Creek, South	11070204	38.09	95.73	38.13	95.97	17
Bloody Run	11070204	37.81	95.49	37.88	95.52	25
Carlyle Creek	11070204	37.98	95.39	38.07	95.37	47
Charles Branch	11070204	37.82	95.39	37.87	95.4	27
Cherry Creek	11070204	37.85	95.58	38	95.71	20
Coal Creek	11070204	37.77	95.45	37.86	95.26	4
Cottonwood Creek	11070204	37.97	95.41	38.02	95.42	48
Crooked Creek	11070204	38.06	95.63	38.26	95.57	44
Draw Creek	11070204	37.65	95.34	37.72	95.36	34
Goose Creek	11070204	37.74	95.28	37.82	95.27	29
Long Creek	11070204	38.11	95.67	38.37	95.61	12
Martin Creek	11070204	37.98	95.48	38.09	95.38	49
Mud Creek	11070204	37.78	95.45	37.78	95.52	26
Mud Creek	11070204	37.79	95.22	37.86	95.24	31
Onion Creek	11070204	37.85	95.47	37.92	95.51	24
Owl Creek	11070204	37.79	95.45	37.85	95.58	19
Owl Creek	11070204	37.85	95.58	37.93	95.88	21
Plum Creek	11070204	37.87	95.59	37.94	95.6	22
Rock Creek	11070204	37.9	95.42	37.97	95.21	7
Rock Creek	11070204	37.98	95.52	37.95	95.6	23
Rock Creek	11070204	38.18	95.73	38.18	95.8	15
Rock Creek	11070204	38.18	95.8	38.17	95.82	32
School Creek	11070204	38.3	95.64	38.35	95.64	38

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Scott Creek	11070204	38.18	95.64	38.28	95.58	40
Slack Creek	11070204	37.8	95.4	37.8	95.31	30
Spring Creek	11070204	38.01	95.55	38.12	95.52	46
Sutton Creek	11070204	37.71	95.41	37.74	95.37	35
Turkey Branch	11070204	37.71	95.31	37.77	95.34	28
Turkey Creek	11070204	38.07	95.67	37.92	95.89	18
Turkey Creek	11070204	37.64	95.41	37.61	95.53	32
Twiss Creek	11070204	38.03	95.58	38.12	95.52	45
Varvel Creek	11070204	38.07	95.83	38.12	95.9	43
Village Creek	11070204	37.71	95.42	37.63	95.6	33
Wolf Creek	11070204	38.15	95.71	38.33	95.67	37
Subbasin: Middle Neosho						
Bachelor Creek	11070205	37.5	95.21	37.45	95.23	40
Canville Creek	11070205	37.56	95.3	37.74	95.1	16
Center Creek	11070205	37.1	95.04	37.15	94.93	25
Cherry Creek	11070205	37.08	95.07	37.32	94.83	4
Deer Creek	11070205	37.1	95.19	37.23	95.3	27
Denny Branch	11070205	37.18	94.97	37.18	94.88	31
Elk Creek	11070205	37.6	95.33	37.5	95.46	19
Elm Creek	11070205	37.47	94.92	37.54	94.95	43
Flat Rock Creek	11070205	37.5	95.16	37.56	95.13	12
Flat Rock Creek	11070205	37.56	95.13	37.71	95.02	14
Fourmile Creek	11070205	37.53	95.21	37.66	95.16	49
Grindstone Creek	11070205	37.42	94.94	37.48	94.98	42
Hickory Creek	11070205	37.34	95.1	37.54	94.98	10
Lake Creek	11070205	37.1	95.16	37	95.29	24
Lightning Creek	11070205	37.18	95.07	37.35	94.96	6
Lightning Creek	11070205	37.35	94.96	37.63	94.9	8
Limestone Creek	11070205	37.35	94.96	37.43	94.82	7
Little Cherry Creek	11070205	37.22	94.94	37.31	94.8	32
Little Elk Creek	11070205	37.57	95.41	37.51	95.42	47
Little Fly Creek	11070205	37.03	95.02	37.05	94.95	26
Little Labette Creek	11070205	37.31	95.24	37.45	95.44	23
Little Walnut Creek	11070205	37.57	95.09	37.69	95.03	46
Litup Creek	11070205	37.28	95.1	37.36	95.03	36
Mulberry Creek	11070205	37.33	94.97	37.44	94.99	35
Murphy Creek	11070205	37.47	95.13	37.52	95.05	41
Ogeese Creek	11070205	37.51	95.23	37.49	95.36	38
Pecan Creek	11070205	37.6	95.29	37.66	95.27	45
Plum Creek	11070205	37.31	95	37.31	94.92	34
Rock Creek	11070205	37.57	95.31	37.52	95.37	48
Spring Creek	11070205	37.21	95.2	37.23	95.29	30
Stink Branch	11070205	37.26	95.04	37.28	94.97	37
Thunderbolt Creek	11070205	37.41	94.93	37.52	94.85	44
Tolen Creek	11070205	37.35	95.25	37.41	95.22	39
Town Creek	11070205	37.02	95.06	37.04	95.16	28
Turkey Creek	11070205	37.08	95.13	37	95.22	29
Walnut Creek	11070205	37.56	95.13	37.66	94.97	13
Wolf Creek	11070205	37.36	94.91	37.36	94.83	33
Subbasin: Lake O'The Cherokees						
Fourmile Creek	11070206	36.99	94.94	37.07	94.88	18
Tar Creek	11070206	36.96	94.84	37.07	94.84	19
Subbasin: Spring						
Little Shawnee Creek	11070207	37.18	94.7	37.29	94.79	22
Long Branch	11070207	37.24	94.67	37.29	94.73	21
Shawnee Creek	11070207	37.09	94.69	37.25	94.8	17
Taylor Branch	11070207	37.29	94.67	37.38	94.61	25
Willow Creek	11070207	37.04	94.73	37.08	94.85	20
Basin: Smoky Hill/Saline **Subbasin: Middle Smoky Hill**						
Ash Creek	10260006	38.65	98.07	38.53	98.19	37
Big Timber Creek	10260006	38.71	99.27	38.64	99.32	24
Big Timber Creek	10260006	38.64	99.32	38.6	99.48	25
Big Timber Creek	10260006	38.6	99.48	38.67	99.74	27
Blood Creek	10260006	38.78	98.42	38.63	98.52	35

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Buck Creek	10260006	38.71	99.08	38.6	99.18	29
Buffalo Creek	10260006	38.74	98.3	38.89	98.32	6
Clear Creek	10260006	38.68	98.08	38.8	98.14	42
Coal Creek	10260006	38.79	98.49	38.63	98.58	34
Cow Creek	10260006	38.76	98.37	38.89	98.33	38
Eagle Creek	10260006	38.72	99.07	38.56	99.06	30
Fossil Creek	10260006	38.79	98.8	38.89	98.96	13
Goose Creek	10260006	38.79	98.7	38.63	98.76	39
Landon Creek	10260006	38.78	98.85	38.61	98.9	31
Loss Creek	10260006	38.74	98.32	38.65	98.38	44
Mud Creek	10260006	38.67	98.17	38.64	98.22	47
Oxide Creek	10260006	38.71	98.21	38.6	98.29	45
Sellens Creek	10260006	38.79	98.77	38.61	98.87	32
Shelter Creek	10260006	38.7	99.21	38.59	99.21	43
Skunk Creek	10260006	38.68	98.14	38.6	98.15	48
Spring Creek	10260006	38.78	98.43	38.74	98.48	41
Timber Creek	10260006	38.6	99.48	38.72	99.67	26
Turkey Creek	10260006	38.73	98.26	38.62	98.32	46
Unnamed Stream	10260006	38.72	99.34	38.87	99.47	20
Unnamed Stream	10260006	38.72	99.41	38.71	99.56	23
Unnamed Stream	10260006	38.64	99.32	38.59	99.32	28
Wilson Creek	10260006	38.79	98.45	38.86	98.49	40
Wolf Creek	10260006	38.75	98.35	38.65	98.48	36
Subbasin: Lower Smoky Hill						
Basket Creek	10260008	39.16	97.2	39.13	97.29	40
Battle Creek	10260008	38.54	97.45	38.42	97.48	23
Carry Creek	10260008	38.75	97.09	38.72	97.13	32
Carry Creek	10260008	38.87	96.92	38.71	97.11	35
Chapman Creek, West	10260008	39.21	97.3	39.27	97.49	5
Dry Creek	10260008	38.74	97.58	38.6	97.8	36
Dry Creek, East	10260008	38.85	97.53	38.76	97.53	43
Hobbs Creek	10260008	38.69	97.42	38.6	97.35	48
Holland Creek	10260008	38.88	97.25	38.74	97.29	25
Holland Creek, East	10260008	38.74	97.29	38.59	97.27	27
Holland Creek, West	10260008	38.74	97.29	38.59	97.31	26
Kentucky Creek	10260008	38.62	97.62	38.46	97.56	17
Kentucky Creek, West	10260008	38.52	97.61	38.47	97.62	54
Lone Tree Creek	10260008	38.95	97.08	39	97.12	41
Lyon Creek, West Branch	10260008	38.87	96.92	38.64	97.09	34
McAllister Creek	10260008	38.73	97.42	38.7	97.35	49
Middle Branch	10260008	38.61	97.2	38.55	97.2	58
Mud Creek	10260008	38.89	97.21	39.13	97.33	8
Otter Creek	10260008	38.95	96.85	38.9	96.82	42
Paint Creek	10260008	38.52	97.71	38.44	97.72	52
Pewee Creek	10260008	38.63	97.59	38.58	97.55	56
Sand Creek	10260008	38.6	97.93	38.7	97.98	46
Sharps Creek	10260008	38.53	97.76	38.5	97.94	16
Spring Creek	10260008	38.78	97.43	38.63	97.52	45
Stag Creek	10260008	38.68	97.42	38.6	97.53	19
Turkey Creek	10260008	38.88	97.19	38.8	97.18	28
Turkey Creek	10260008	38.8	97.18	38.58	97.25	30
Turkey Creek, East	10260008	38.69	97.16	38.57	97.09	50
Turkey Creek, West Branch	10260008	38.8	97.18	38.63	97.25	29
Unnamed Stream	10260008	38.72	96.95	38.72	96.94	K3
Unnamed Stream	10260008	38.71	97.06	38.71	97.07	K4
Unnamed Stream	10260008	38.73	96.97	38.74	96.99	K24
Wiley Creek	10260008	38.61	97.93	38.68	97.94	47
Subbasin: Upper Saline						
Cedar Creek	10260009	38.96	98.68	38.86	98.79	30
Chalk Creek	10260009	39.11	99.82	39.21	99.86	26
Coyote Creek	10260009	39.11	100.09	39.03	100.13	23
Eagle Creek	10260009	39.11	98.91	39.27	99.08	6
Happy Creek	10260009	39.12	99.84	39.24	99.98	25
Paradise Creek	10260009	38.98	98.79	39.11	98.91	5
Salt Creek	10260009	38.96	98.88	38.97	99.07	20
Spring Creek, East	10260009	39.09	99.35	39.23	99.45	10
Sweetwater Creek	10260009	39.06	99.1	39.02	99.19	29
Trego Creek	10260009	39.08	99.49	39.04	99.67	19

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Unnamed Stream	10260009	39.11	99.7	39.23	99.87	13
Wild Horse Creek	10260009	39.11	99.54	39.25	99.58	27
Subbasin: Lower Saline						
Bacon Creek	10260010	39.11	98.34	39.29	98.4	7
Blue Stem Creek	10260010	39.03	98.48	39	98.6	33
Coon Creek	10260010	39.11	98.68	39.22	98.73	31
Dry Creek	10260010	38.87	97.61	38.74	97.62	29
Eff Creek	10260010	38.88	97.79	38.82	97.9	23
Elkhorn Creek	10260010	39.01	98.09	38.84	98.18	17
Elkhorn Creek, West	10260010	38.96	98.1	38.84	98.2	38
Fourmile Creek	10260010	39.09	98.63	39.22	98.64	30
Lost Creek	10260010	39.04	98.16	39.12	98.17	34
Owl Creek	10260010	38.97	97.83	38.89	98	18
Owl Creek	10260010	38.99	97.96	38.88	98.02	39
Ralston Creek	10260010	38.76	97.8	38.63	97.84	28
Shaw Creek	10260010	38.96	97.77	38.92	97.8	41
Spillman Creek	10260010	39.03	98.21	39.11	98.34	6
Spillman Creek, North Branch	10260010	39.11	98.34	39.24	98.5	8
Spring Creek	10260010	38.99	98.21	38.85	98.21	16
Spring Creek	10260010	38.89	97.6	38.86	97.63	19
Spring Creek	10260010	38.86	97.63	38.84	97.7	20
Spring Creek	10260010	39.84	97.7	38.77	97.8	24
Spring Creek	10260010	38.77	97.8	38.76	97.8	26
Spring Creek	10260010	38.76	97.8	38.63	97.86	27
Table Rock Creek	10260010	38.86	97.95	38.81	98.03	40
Trail Creek	10260010	39.08	98.27	39.2	98.31	32
Twelvemile Creek	10260010	39.01	98.01	39.08	98.06	36
Twin Creek, West	10260010	38.99	98.38	38.9	98.42	37
West Spring Creek	10260010	38.77	97.8	38.75	98.01	25
Wolf Creek	10260010	39	98.43	39.05	98.51	10
Wolf Creek, East Fork	10260010	39.05	98.51	39.24	98.62	11
Wolf Creek, West Fork	10260010	39.05	98.51	39.18	98.83	12
Yauger Creek	10260010	39.03	98.15	39.11	98.15	35
Basin: Solomon **Subbasin: Upper North Fork Solomon**						
Ash Creek	10260011	39.66	99.4	39.78	99.49	24
Beaver Creek	10260011	39.67	99.56	39.81	99.6	23
Big Timber Creek	10260011	39.64	99.73	39.78	99.79	8
Bow Creek	10260011	39.56	99.28	39.45	100.23	15
Cactus Creek	10260011	39.66	99.58	39.8	99.7	28
Crooked Creek	10260011	39.66	99.55	39.82	99.68	6
Elk Creek	10260011	39.61	100	39.66	100.23	12
Elk Creek, East	10260011	39.62	99.92	39.73	100	25
Game Creek	10260011	39.62	99.8	39.76	99.84	10
Game Creek	10260011	39.66	99.83	39.75	99.83	27
Lost Creek	10260011	39.61	99.98	39.53	100.02	20
Sand Creek	10260011	39.64	99.75	39.73	99.82	26
Scull Creek	10260011	39.65	99.66	39.78	99.74	21
Spring Creek	10260011	39.58	100.16	39.52	100.13	19
Wolf Creek	10260011	39.67	99.47	39.79	99.55	22
Subbasin: Lower North Fork Solomon						
Beaver Creek	10260012	39.65	98.86	39.75	98.84	10
Beaver Creek, East Branch	10260012	39.75	98.84	39.95	98.81	11
Beaver Creek, Middle	10260012	39.75	98.84	39.75	98.85	12
Beaver Creek, Middle	10260012	39.75	98.85	39.97	98.97	13
Beaver Creek, West	10260012	39.75	98.85	39.96	99	14
Big Creek	10260012	39.72	99.19	39.92	99.27	26
Boughton Creek	10260012	39.77	99.41	39.9	99.45	34
Buck Creek	10260012	39.64	98.52	39.66	98.6	43
Cedar Creek	10260012	39.65	98.91	39.68	98.95	16
Cedar Creek	10260012	39.68	98.95	39.7	99	18
Cedar Creek, East	10260012	39.68	98.95	39.93	99.01	17
Cedar Creek, East Middle	10260012	39.88	99.06	39.97	99.06	37
Cedar Creek, Middle	10260012	39.7	99	39.95	99.13	19
Deer Creek	10260012	39.66	99.1	39.7	99.14	23
Deer Creek	10260012	39.7	99.14	39.72	99.19	25
Deer Creek	10260012	39.72	99.19	39.73	99.25	27

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Deer Creek	10260012	39.73	99.25	39.73	99.33	29
Deer Creek	10260012	39.73	99.33	39.85	99.64	31
Dry Creek	10260012	39.6	98.8	39.76	98.71	42
Glen Rock Creek	10260012	39.64	98.94	39.56	98.96	41
Lawrence Creek	10260012	39.57	98.74	39.54	98.88	44
Lindley Creek	10260012	39.56	98.7	39.65	98.7	45
Little Oak Creek	10260012	39.54	98.48	39.74	98.49	3
Medicine Creek	10260012	39.65	99.02	39.55	99.13	33
Oak Creek	10260012	39.5	98.46	39.54	98.48	2
Oak Creek	10260012	39.54	98.48	39.88	98.69	4
Oak Creek, East	10260012	39.68	98.55	39.84	98.55	40
Oak Creek, West	10260012	39.72	98.59	39.86	98.69	39
Plotner Creek	10260012	39.73	99.33	39.91	99.38	30
Plum Creek	10260012	39.7	99	39.94	99.19	20
Spring Creek	10260012	39.6	98.82	39.9	98.72	8
Spring Creek	10260012	39.73	99.25	39.92	99.33	28
Starvation Creek	10260012	39.67	99.1	39.9	99.49	38
Turner Creek	10260012	39.7	99.14	39.92	99.25	24
Subbasin: Upper South Fork Solomon						
Spring Creek	10260013	39.38	99.61	39.49	99.85	5
Subbasin: Lower South Fork Solomon						
Ash Creek	10260014	39.41	99.36	39.52	99.44	22
Boxelder Creek	10260014	39.42	99.31	39.25	99.31	14
Carr Creek	10260014	39.45	98.46	39.24	98.61	21
Covert Creek	10260014	39.43	98.71	39.25	98.9	19
Crooked Creek	10260014	39.46	98.94	39.54	99.03	27
Dibble Creek	10260014	39.43	99.32	39.51	99.36	23
Elm Creek	10260014	39.44	99.23	39.25	99.26	15
Jim Creek	10260014	39.43	99.18	39.53	99.22	25
Kill Creek	10260014	39.43	98.78	39.27	99	18
Kill Creek, East	10260014	39.4	98.8	39.29	98.89	28
Lost Creek	10260014	39.4	99.39	39.25	99.53	13
Lucky Creek	10260014	39.44	99.01	39.33	99.07	26
Medicine Creek	10260014	39.43	99.14	39.27	99.18	16
Medicine Creek	10260014	39.45	98.83	39.29	99.07	17
Robbers Roost Creek	10260014	39.42	99.28	39.29	99.3	24
Twin Creek	10260014	39.43	98.54	39.24	98.76	20
Twin Creek, East	10260014	39.41	98.55	39.32	98.58	29
Subbasin: Solomon River						
Antelope Creek	10260015	39.33	98.25	39.38	98.31	43
Antelope Creek	10260015	39.03	97.62	39.01	97.7	58
Battle Creek	10260015	39.2	98.08	39.12	98.22	33
Battle Creek	10260015	39.06	97.67	39.04	97.74	57
Brown Creek	10260015	39.47	98.17	39.72	98.24	15
Coal Creek	10260015	38.98	97.49	39.05	97.47	2
Cow Creek	10260015	39.15	97.9	39.28	97.92	28
Cow Creek	10260015	39.18	97.91	39.26	97.88	55
Cris Creek	10260015	39.34	97.84	39.46	97.79	48
Disappointment Creek	10260015	39.55	98.32	39.63	98.29	35
Dry Creek	10260015	39.45	98.06	39.53	98.01	37
Dry Creek	10260015	39.25	97.76	39.3	97.66	52
Elm Creek	10260015	39.66	98.34	39.81	98.26	59
Elkhorn Creek, West	10260015	39.16	97.99	39.09	98.07	47
Fifth Creek	10260015	39.24	98.08	39.34	98.11	45
Fourth Creek	10260015	39.39	97.99	39.31	98	46
Frog Creek	10260015	39.48	98.28	39.55	98.27	34
Granite Creek	10260015	39.53	98.38	39.62	98.42	24
Indian Creek	10260015	39.45	98.15	39.39	98.21	40
Leban Creek	10260015	39.43	98.11	39.38	98.23	41
Limestone Creek, Middle	10260015	39.63	98.36	39.83	98.39	21
Limestone Creek, West	10260015	39.61	98.34	39.63	98.36	20
Limestone Creek, West	10260015	39.63	98.36	39.84	98.45	22
Lindsey Creek	10260015	39.1	97.69	39.26	97.5	7
Little Creek	10260015	39.28	98.2	39.3	98.32	44
Lost Creek	10260015	39.12	97.76	39.25	97.87	56
Marshall Creek	10260015	39.4	98.03	39.34	98.08	42
Mill Creek	10260015	39.45	98.41	39.36	98.4	38

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Mortimer Creek	10260015	39.29	97.8	39.44	97.76	49
Mulberry Creek	10260015	39.46	98.13	39.59	98.17	36
Pipe Creek	10260015	39.12	97.71	39.22	97.63	9
Pipe Creek	10260015	39.22	97.63	39.43	97.6	10
Pipe Creek, West	10260015	39.22	97.63	39.42	97.61	11
Plum Creek	10260015	39.43	98.07	39.61	98.16	13
Rattlesnake Creek	10260015	39.19	98.04	39.2	98.08	31
Rattlesnake Creek	10260015	39.2	98.08	39.2	98.29	32
Sand Creek	10260015	39.02	97.6	39.18	97.52	4
Second Creek	10260015	39.36	97.89	39.28	97.97	51
Second Creek	10260015	39.15	97.94	39.27	97.98	54
Spring Creek	10260015	39.15	97.92	39.04	98.02	53
Turkey Creek	10260015	39.46	98.21	39.39	98.27	39
Walnut Creek	10260015	39.45	98.35	39.34	98.41	26
Yockey Creek	10260015	39.28	97.79	39.41	97.72	50
Basin: Upper Arkansas **Subbasin: Middle Arkansas-Lake McKinney**						
Great Eastern Ditch	11030001	37.98	101.19	38.06	100.99	2
Subbasin: Buckner						
Buckner Creek, South Fork	11030006	37.95	100.2	37.84	100.28	6
Duck Creek	11030006	37.9	99.94	37.8	100.1	8
Elm Creek	11030006	37.9	99.88	37.75	99.93	5
Rock Creek	11030006	38.09	99.79	38	99.89	9
Saw Log Creek	11030006	38.13	99.69	37.9	99.88	3
Saw Log Creek	11030006	37.9	99.88	37.82	100.21	4
Subbasin: Lower Walnut Creek						
Alexander Dry Creek	11030008	38.47	99.58	38.65	99.8	7
Bazine Creek	11030008	38.44	99.69	38.62	99.95	9
Boot Creek	11030008	38.45	98.96	38.55	99.05	15
Dry Creek	11030008	38.46	99.02	38.4	99.17	14
Dry Walnut Creek	11030008	38.38	98.73	38.37	99.24	13
Otter Creek	11030008	38.45	99.29	38.38	99.4	12
Sand Creek	11030008	38.48	99.14	38.57	99.41	3
Sandy Creek	11030008	38.47	99.39	38.35	99.44	11
Walnut Creek	11030008	38.36	98.67	38.38	98.73	1
Walnut Creek	11030008	38.38	98.73	38.48	99.14	2
Walnut Creek	11030008	38.48	99.14	38.45	99.29	4
Walnut Creek	11030008	38.45	99.29	38.47	99.39	5
Walnut Creek	11030008	38.47	99.39	38.47	99.58	6
Walnut Creek	11030008	38.47	99.58	38.44	99.69	8
Walnut Creek	11030008	38.44	99.69	38.41	99.88	10
Basin: Upper Republican **Subbasin: South Fork Republican**						
Battle Creek	10250003	39.65	101.95	39.59	102.05	71
Big Timber Creek	10250003	40.02	101.53	39.78	101.58	61
Drury Creek	10250003	39.75	101.84	39.66	101.86	60
Subbasin: Beaver						
Beaver Creek	10250014	40.01	100.53	39.82	101.03	2
Basin: Verdigris **Subbasin: Upper Verdigris**						
Bachelor Creek	11070101	37.84	96.1	37.97	96.33	21
Bernard Creek	11070101	37.91	96.17	37.97	96.22	24
Big Cedar Creek	11070101	37.51	95.67	37.62	95.53	39
Brazil Creek	11070101	37.84	95.96	37.91	95.9	31
Buffalo Creek	11070101	37.64	95.75	37.79	95.59	2
Buffalo Creek, West	11070101	37.68	95.73	37.8	95.76	34
Cedar Creek	11070101	37.87	95.94	37.91	95.88	32
Chetopa Creek	11070101	37.44	95.67	37.59	95.51	22
Crooked Creek	11070101	37.59	95.71	37.62	95.62	38
Dry Creek	11070101	37.86	95.98	37.99	95.92	27
Elder Branch	11070101	37.64	95.75	37.68	95.6	37

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Fancy Creek	11070101	37.8	96.04	37.76	96.07	28
Greenhall Creek	11070101	37.99	96.02	38.04	95.96	26
Holderman Creek	11070101	38.12	96.1	38.11	96.2	47
Homer Creek	11070101	37.84	96.1	37.99	96.28	20
Kelly Branch	11070101	38.15	96.16	38.22	96.17	42
Kuntz Branch	11070101	37.82	96.07	37.76	96.08	29
Little Sandy Creek	11070101	37.68	95.83	37.76	95.8	33
Long Creek	11070101	38.06	96.05	38.14	95.98	45
Miller Creek	11070101	37.81	95.96	37.84	95.87	30
Moon Branch	11070101	38.17	96.19	38.25	96.26	43
Onion Creek	11070101	38	96.14	38.06	96.21	23
Rock Creek	11070101	38.16	96.21	38.29	96.33	14
Ross Branch	11070101	37.69	95.88	37.7	96.01	35
Sandy Creek	11070101	37.68	95.84	37.9	95.84	4
Shaw Creek	11070101	38.18	96.28	38.26	96.37	40
Slate Creek	11070101	37.97	96.11	38.06	96.31	25
Snake Creek	11070101	37.62	95.76	37.61	95.87	36
Tate Branch Creek	11070101	38.15	96.13	38.21	96.12	44
Van Horn Creek	11070101	38.06	96.05	38.06	96.13	46
Verdigris River, Bernard Branch	11070101	38.15	96.17	38.09	96.35	16
Verdigris River, North Branch	11070101	38.15	96.17	38.16	96.21	13
Verdigris River, North Branch	11070101	38.16	96.21	38.09	96.36	15
Walnut Creek	11070101	37.79	95.99	37.84	96.1	19
West Creek	11070101	37.89	96.01	38.1	96.28	17
Wolf Creek	11070101	38.19	96.31	38.23	96.4	41
Subbasin: Fall						
Battle Creek	11070102	37.99	96.51	38.02	96.54	18
Burnt Creek	11070102	37.79	96.41	37.86	96.47	24
Clear Creek	11070102	37.5	95.83	37.52	95.74	37
Coon Creek	11070102	37.87	96.4	37.85	96.46	25
Coon Creek	11070102	37.56	95.94	37.51	96	36
Crain Creek	11070102	37.63	96.05	37.7	96.03	32
Honey Creek	11070102	37.72	96.2	37.75	96.33	26
Indian Creek	11070102	37.58	95.96	37.58	96.17	15
Ivanpah Creek	11070102	37.9	96.45	37.88	96.58	19
Kitty Creek	11070102	37.78	96.34	37.75	96.4	27
Little Indian Creek	11070102	37.54	96.07	37.49	96.1	34
Little Salt Creek	11070102	37.62	96.06	37.59	96.12	35
Oleson Creek	11070102	37.95	96.39	38.02	96.44	21
Otis Creek	11070102	37.92	96.46	38.03	96.46	20
Plum Creek	11070102	37.61	96.2	37.66	96.27	30
Rainbow Creek, East	11070102	37.51	95.86	37.46	95.98	17
Salt Creek	11070102	37.61	96.04	37.65	96.27	14
Salt Creek	11070102	37.51	95.84	37.6	95.87	38
Silver Creek	11070102	37.59	95.96	37.64	95.96	33
Snake Creek	11070102	37.71	96.22	37.67	96.24	31
Spring Creek	11070102	37.81	96.29	37.7	96.51	12
Swing Creek	11070102	38.01	96.32	38.02	96.31	989
Tadpole Creek	11070102	37.7	96.27	37.74	96.38	29
Watson Branch	11070102	37.69	96.38	37.76	96.4	23
Subbasin: Middle Verdigris						
Big Creek	11070103	36.98	95.35	37.03	95.31	21
Biscuit Creek	11070103	37.05	95.71	37.1	95.69	53
Bluff Run	11070103	37.07	95.74	37.11	95.72	54
Choteau Creek	11070103	37.29	95.66	37.36	95.6	63
Claymore Creek	11070103	37.06	95.59	37.15	95.5	50
Deadman Creek	11070103	37.06	95.72	37	95.78	57
Deer Creek	11070103	37.07	95.51	37.05	95.36	51
Drum Creek	11070103	37.2	95.63	37.44	95.5	34
Dry Creek	11070103	37.39	95.66	37.45	95.51	37
Fawn Creek	11070103	37.08	95.75	37	95.8	56
Mud Creek	11070103	37.17	95.45	37.23	95.44	59
Onion Creek	11070103	36.99	95.59	37.18	95.9	39
Potato Creek	11070103	37.11	95.59	37.2	95.51	31
Prior Creek	11070103	37.34	95.68	37.36	95.62	62
Pumpkin Creek	11070103	37.04	95.58	37.29	95.39	28
Richland Creek	11070103	37.12	95.46	37.15	95.33	49
Rock Creek	11070103	37.21	95.67	37.16	95.74	58

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Rock Creek	11070103	37.38	95.52	37.38	95.47	61
Snow Creek	11070103	36.96	95.53	37.03	95.34	25
Spring Creek	11070103	37.1	95.76	37.06	95.82	55
Sycamore Creek	11070103	37.03	95.65	37.1	95.68	52
Wildcat Creek	11070103	37.27	95.44	37.3	95.42	60
Subbasin: Elk						
Bachelor Creek	11070104	37.31	95.97	37.39	95.94	25
Bloody Run	11070104	37.34	96.01	37.34	96.07	26
Bull Creek	11070104	37.47	96.34	37.44	96.41	33
Card Creek	11070104	37.25	95.85	37.21	95.94	19
Chetopa Creek	11070104	37.23	95.81	37.21	95.85	18
Clear Creek	11070104	37.36	96.15	37.31	96.21	30
Clear Creek	11070104	37.49	96.36	37.49	96.47	32
Coffey Branch	11070104	37.27	96.01	37.24	96.07	20
Duck Creek	11070104	37.3	95.92	37.46	95.95	3
Elk River, Mound Branch	11070104	37.42	96.22	37.43	96.41	15
Elk River, South Branch	11070104	37.51	96.4	37.54	96.5	38
Elk River, Rowe Branch	11070104	37.55	96.44	37.58	96.41	39
Elm Branch	11070104	37.37	95.87	37.42	95.83	23
Hickory Creek	11070104	37.35	96.02	37.44	95.98	28
Hitchen Creek	11070104	37.38	96.06	37.52	96.15	7
Hitchen Creek, East	11070104	37.45	96.15	37.5	96.11	35
Little Duck Creek	11070104	37.32	95.89	37.37	95.93	24
Little Hitchen Creek	11070104	37.42	96.15	37.46	96.11	37
Painterhood Creek	11070104	37.38	96.04	37.52	96.04	5
Painterhood Creek, East	11070104	37.43	96.05	37.5	95.98	36
Pan Creek	11070104	37.3	96.08	37.34	96.1	27
Pawpaw Creek	11070104	37.45	96.23	37.61	96.31	11
Racket Creek	11070104	37.28	95.78	37.35	95.78	21
Rock Creek	11070104	37.45	96.27	37.6	96.34	13
Salt Creek	11070104	37.27	95.92	37.31	96.19	17
Salt Creek, South	11070104	37.3	96.09	37.31	96.17	29
Skull Creek	11070104	37.42	96.36	37.4	96.38	31
Snake Creek	11070104	37.47	96.25	37.56	96.25	34
Sycamore Creek	11070104	37.28	95.74	37.42	95.8	22
Wildcat Creek	11070104	37.37	96.17	37.38	96.38	16
Subbasin: Caney						
Bachelor Creek	11070106	37.2	96.15	37.27	96.11	47
Bee Creek	11070106	37.05	95.97	37.23	96	9
California Creek	11070106	37.17	95.99	37.22	96.04	48
Caney Creek	11070106	37.11	96.05	37.33	96.37	12
Caney River, East Fork	11070106	37.36	96.47	37.45	96.42	52
Caney Creek, North	11070106	37.11	96.05	37.32	96.26	11
Cedar Creek	11070106	37.08	96.47	37.15	96.61	30
Cedar Creek	11070106	36.99	96.24	37.12	96.29	32
Cheyenne Creek	11070106	37.02	95.95	37.13	95.87	40
Coon Creek	11070106	36.99	96.23	37.04	96.19	36
Corum Creek	11070106	37.34	96.45	37.41	96.41	51
Cotton Creek	11070106	37.07	95.95	37.12	95.89	38
Cotton Creek, North Fork	11070106	36.98	95.88	37.01	95.87	37
Dry Creek	11070106	37.05	96.44	37.11	96.44	29
Fly Creek	11070106	37.15	96.11	37.23	96.06	46
Illinois Creek	11070106	37.11	95.95	37.2	95.93	39
Jim Creek	11070106	37.21	96.56	37.24	96.61	49
Lake Creek	11070106	37.03	95.96	37.03	96.05	34
Otter Creek	11070106	37.09	96.11	37.06	96.17	33
Pool Creek	11070106	37.15	96.27	37.18	96.36	43
Possum Trot Creek	11070106	37.03	96.41	36.99	96.46	74
Rock Creek	11070106	37.04	96.43	37.05	96.66	28
Spring Creek	11070106	37.17	96.27	37.3	96.28	44
Spring Creek	11070106	37.27	96.46	37.35	96.53	53
Squaw Creek	11070106	37.24	96.46	37.27	96.42	42
Sycamore Creek	11070106	37.02	96.35	37.14	96.34	31
Turkey Creek	11070106	37.21	96.18	37.23	96.24	45
Union Creek	11070106	37.2	96.49	37.29	96.53	41
Wolf Creek	11070106	37.11	96.15	37.18	96.18	35
Wolf Creek	11070106	37.26	96.46	37.37	96.38	50

Stream segment name	HUC8	Latitude/longitude				Segment No.
		Lower	Lower	Upper	Upper	
Basin: Walnut **Subbasin: Upper Walnut River**						
Badger Creek	11030017	37.74	97.01	37.77	97.08	36
Bemis Creek	11030017	37.85	96.73	37.89	96.59	8
Coke Creek	11030017	37.94	96.79	38.08	96.75	15
Constant Creek	11030017	37.8	96.86	37.84	96.92	41
Dry Creek	11030017	37.67	97	37.77	97.22	27
Dry Creek	11030017	37.93	97.04	38.04	97.13	32
Durechen Creek	11030017	37.92	96.75	38.01	96.56	12
Elm Creek	11030017	37.68	96.99	37.79	96.95	43
Fourmile Creek	11030017	37.89	97.05	37.99	96.91	20
Gilmore Branch	11030017	37.95	96.79	37.98	96.82	39
Gypsum Creek	11030017	37.93	97.15	38.01	97.25	30
Henry Creek	11030017	37.99	97.03	38.11	97.11	33
Lower Branch	11030017	37.85	96.72	37.83	96.57	42
Prairie Creek	11030017	37.84	97.11	37.86	97.24	35
Rock Creek	11030017	37.85	97.04	37.93	96.94	37
Sand Creek	11030017	37.9	97.19	37.91	97.25	29
Satchel Creek	11030017	37.88	96.75	37.91	96.58	10
School Branch	11030017	38.01	96.72	38.08	96.71	45
Sutton Creek	11030017	37.75	96.88	37.82	96.93	40
Walnut Creek	11030017	38.03	97.2	38.06	97.26	44
Whitewater Creek	11030017	37.83	97.1	37.81	97.23	34
Whitewater Creek, East Branch	11030017	37.97	97.16	38.1	97.19	31
Whitewater River, East Branch	11030017	37.98	97.02	38.1	96.9	22
Whitewater River, West Branch	11030017	37.81	97.02	37.85	97.12	24
Whitewater River, West Branch	11030017	37.85	97.12	38.12	97.24	25
Wildcat Creek	11030017	37.85	97.12	38	97.26	26
Wildcat Creek, West	11030017	37.93	97.22	37.98	97.26	28
Subbasin: Lower Walnut River						
Black Crook Creek	11030018	37.22	96.98	37.27	96.93	18
Cedar Creek	11030018	37.3	96.96	37.33	96.81	19
Chigger Creek	11030018	37.48	96.9	37.54	96.83	21
Crooked Creek	11030018	37.31	97.04	37.37	97.09	31
Durham Creek	11030018	37.47	96.94	37.45	96.88	23
Dutch Creek	11030018	37.24	97	37.34	96.94	2
Dutch Creek	11030018	37.34	96.94	37.47	96.73	4
Eightmile Creek	11030018	37.45	97.04	37.63	97.16	30
Foos Creek	11030018	37.31	97.03	37.36	96.97	26
Hickory Creek	11030018	37.61	96.91	37.66	96.52	12
Honey Creek	11030018	37.62	96.69	37.67	96.62	33
Little Dutch Creek	11030018	37.35	97.04	37.4	96.95	27
Lower Dutch Creek	11030018	37.45	96.81	37.46	96.72	20
Plum Creek	11030018	37.62	96.73	37.59	96.64	36
Polecat Creek	11030018	37.43	97.04	37.57	97.19	17
Posey Creek	11030018	37.16	96.95	37.21	97.03	37
Richland Creek	11030018	37.39	96.89	37.43	96.77	25
Rock Creek, North Branch	11030018	37.51	96.79	37.56	96.61	35
Sanford Creek	11030018	37.4	97.01	37.41	96.96	29
Spring Branch	11030018	37.66	97.15	37.7	97.21	32
Stalter Branch	11030018	37.44	96.98	37.43	96.92	24
Stewart Creek	11030018	37.37	97.05	37.43	97.12	28
Swisher Branch	11030018	37.49	96.92	37.55	96.87	22
Total = 1292						

Lake name	County	Waterbody No.
Basin: Cimarron **Subbasin: Upper Cimarron (HUC 11040002)**		
Moss Lake East	Morton	L1
Moss Lake West	Morton	L3
Subbasin: North Fork Cimarron (HUC 11040003)		
Frazier Lake	Grant	L4

Lake name	County	Waterbody No.
Subbasin: North Fork Cimarron (HUC 11040003)		
Russell Lake	Stevens	L5
Subbasin: Upper Cimarron-Bluff (HUC 11040008)		
Clark State Fishing Lake	Clark	L8
Saint Jacob's Well	Clark	L7
Basin: Kansas/Lower Republican Subbasin: Middle Republican (HUC 10250016)		
Lake Jewell	Jewell	L14
Subbasin: Lower Republican (HUC 10250017)		
Belleville City Lake	Republic	L16
Wakefield Lake	Clay	L19
Subbasin: Upper Kansas (HUC 10270101)		
Ogden City Lake	Riley	L20
Rocky Ford Fishing Lake	Riley	L21
Subbasin: Middle Kansas (HUC 10270102)		
Alma City Reservoir	Wabaunsee	L23
Cedar Crest Pond	Shawnee	L24
Central Park Lake	Shawnee	L25
Gage Park Lake	Shawnee	L28
Jeffrey Energy Center Lakes	Pottawatomie	L29
Wamego City Lake	Pottawatomie	L40
Pillsbury Crossing Fishing Lake	Riley	L33
Pottawatomie State Fishing Lake #1	Pottawatomie	L34
Pottawatomie State Fishing Lake #2	Pottawatomie	L35
Shawnee County State Fishing Lake	Shawnee	L36
Subbasin: Delaware (HUC 10270103)		
Atchison County Park Lake	Atchison	L41
Elk Horn Lake	Jackson	L42
Little Lake	Brown	L43
Nebo Watershed Lake	Jackson	L46
Subbasin: Lower Kansas (HUC 10270104)		
Carbondale West Lake	Osage	L48
Douglas County State Lake	Douglas	L50
Leavenworth County State Fishing Lake	Leavenworth	L53
Lenexa Lake	Johnson	L54
Mahaffie Farmstead Pond	Johnson	L56
North Park Lake	Wyandotte	L58
Pierson Park Lake	Wyandotte	L61
Potter's Lake	Douglas	L62
Strowbridge Reservoir	Osage	L63
Sunflower Park Lake	Johnson	L64
Waterworks Lakes	Johnson	L65
Subbasin: Lower Big Blue (HUC 10270205)		
Lake Idlewild	Marshall	L67
Subbasin: Lower Little Blue (HUC 10270207)		
Washington County State Fishing Lake	Washington	L68
Basin: Lower Arkansas Subbasin: Rattlesnake (HUC 11030009)		
Kiowa County State Fishing Lake	Kiowa	L71
Subbasin: Cow (HUC 11030011)		
Dillon Park Lakes #1	Reno	L76
Dillon Park Lake #2	Reno	L77

Lake name	County	Waterbody No.
Sterling City Lake	Rice	L78
Subbasin: Little Arkansas (HUC 11030012)		
Mingenback Lake	McPherson	L82
Newton City Park Lake	Harvey	L83
Subbasin: Middle Arkansas-Slate (HUC 11030013)		
Belaire Lake	Sedgwick	L84
Buffalo Park Lake	Sedgwick	L86
Emery Park	Sedgwick	L90
Harrison Park Lake	Sedgwick	L91
Horseshoe Lake	Sedgwick	L92
Kid's Pond	Sedgwick	L93
Moss Lake	Sedgwick	L94
Riggs Park Lake	Sedgwick	L95
Vic's Lake	Sedgwick	L96
Windmill Lake	SedgwicK	L98
Subbasin: South Fork Ninnescah (HUC 11030015)		
Kingman County State Fishing Lake	Kingman	L101
Lemon Park Lake	Pratt	L103
Subbasin: Kaw Lake (HUC 11060001)		
Cowley County State Fishing Lake	Cowley	L107
Subbasin: Medicine Lodge (HUC 11060003)		
Barber County State Fishing Lake	Barber	L108
Subbasin: Lower Salt Fork Arkansas (HUC 11060004)		
Hargis Lake	Barber	L109
Basin: Marais Des Cygnes **Subbasin: Upper Marais Des Cygnes (HUC 10290101)**		
Allen/Admire City Lake	Lyon	L115
Cedar Creek Lake	Anderson	L116
Crystal Lake	Anderson	L117
Lebo City Lake	Coffey	L121
Lebo City Park Lake	Coffey	L121
Lyon County State Fishing Lake	Lyon	L124
Osage City Reservoir	Osage	L126
Osage County State Fishing Lake	Osage	L127
Waterworks Impoundment	Anderson	L132
Subbasin: Lower Marais Des Cygnes (HUC 10290102)		
Edgerton City Lake	Johnson	L133
Edgerton South Lake	Johnson	L134
Lake Lacygne	Linn	L136
Louisburg State Fishing Lake	Miami	L139
Miami County State Fishing Lake	Miami	L141
Paola City Lake	Miami	L144
Pleasanton Lake #1	Linn	L146
Pleasanton Lake #2	Linn	L147
Spring Hill City Lake	Johnson	L149
Subbasin: Little Osage (HUC 10290103)		
Blue Mound City Lake	Linn	L150
Subbasin: Marmaton (HUC 10290104)		
Bourbon County State Fishing Lake	Bourbon	L152
Bronson City Lake	Bourbon	L153
Gunn Park Lake, East	Bourbon	L155
Gunn Park Lake, West	Bourbon	L156
Mulberry City Park	Crawford	L159
Rock Creek Lake	Bourbon	L160

Lake name	County	Waterbody No.
Basin: Missouri **Subbasin: Tarkio-Wolf (HUC 10240005)**		
Brown County State Fishing Lake	Brown	L161
Hiawatha City Lake	Brown	L162
Subbasin: South Fork Big Nemaha (HUC 10240007)		
Pony Creek Lake	Nemaha	L163
Sabetha City Lake	Nemaha	L164
Subbasin: Independence-Sugar (HUC 10240011)		
Atchison City Lakes	Atchison	L165
Atchison County State Fishing Lake	Atchison	L166
Big Eleven Lake	Wyandotte	L167
Doniphan Fair Association Lake	Doniphan	L168
Jerrys Lake	Leavenworth	L169
Lansing City Lake	Leavenworth	L170
South Park Lake	Leavenworth	L171
Subbasin: Lower Missouri-Crooked (HUC 10300101)		
Prairie View Park	Johnson	L175
South Park Lake	Johnson	L176
Stanley Rural Water District Lake #2	Johnson	L177
Stohl Park Lake	Johnson	L70
Basin: Neosho **Subbasin: Upper Cottonwood (HUC 11070202)**		
Hillsboro City Pond	Marion	L184
Subbasin: Lower Cottonwood (HUC 11070203)		
Peter Pan Pond	Lyon	L192
Subbasin: Upper Neosho (HUC 11070204)		
Chanute City (Santa Fe) Lake	Neosho	L193
Circle Lake	Woodson	L45
Leonard's Lake	Woodson	L72
Neosho Falls City Lake	Woodson	L208
New Strawn Park	Coffey	L197
Subbasin: Middle Neosho (HUC 11070205)		
Altamont City Lake #1	Labette	L201
Bartlett City Lake	Labette	L204
Harmon Wildlife Area Lakes	Labette	L205
Mined Land Wildlife Area Lakes	Cherokee	L206
Neosho County State Fishing Lake	Neosho	L207
Timber Lake	Neosho	L211
Subbasin: Spring (HUC 11070207)		
Empire Lake	Cherokee	L212
Frontenac City Park	Crawford	L213
Mined Land Wildlife Area Lakes	Crawford	L214
Pittsburg College Lake	Crawford	L215
Playters Lake	Crawford	L216
Basin: Smoky Hill/Saline **Subbasin: North Fork Smoky Hill (HUC 10260002)**		
Smoky Hill Garden Lake	Sherman	L217
Subbasin: Upper Smoky Hill (HUC 10260003)		
Logan County State Fishing Lake	Logan	L22
Subbasin: Middle Smoky Hill (HUC 10260006)		
Fossil Lake	Russell	L222

Lake name	County	Waterbody No.
Subbasin: Big (HUC 10260007)		
Big Creek Oxbow	Ellis	L224
Ellis City Lake	Ellis	L225
Subbasin: Lower Smoky Hill (HUC 10260008)		
Geary County State Fishing Lake	Geary	L226
Herington City Park Lake	Dickinson	L228
Herington Reservoir	Dickinson	L229
Lakewood Park Lake	Saline	L230
McPherson County State Fishing Lake	McPherson	L231
Rimrock Lake	Geary	L218
Subbasin: Upper Saline (HUC 10260009)		
Plainville Township Lake	Rooks	L233
Subbasin: Lower Saline (HUC 10260010)		
Lucus City Lake	Russell	L235
Saline County State Fishing Lake	Saline	L236
Basin: Solomon		
Subbasin: Lower North Fork Solomon (HUC 10260012)		
.		
Francis Wachs Wildlife Area Lakes	Smith	L241
Subbasin: Upper South Fork Solomon (HUC 10260013)		
Antelope Lake	Graham	L242
Sheridan County State Fishing Lake	Sheridan	L243
Subbasin: Lower South Fork Solomon (HUC 10260014)		
Rooks County State Fishing Lake	Rooks	L246
Subbasin: Solomon River (HUC 10260015)		
Jewell County State Fishing Lake	Jewell	L237
Ottawa County State Fishing Lake	Ottawa	L248
Basin: Upper Arkansas		
Subbasin: Middle Arkansas-Lake McKinney (HUC 11030001)		
Lake McKinney	Kearny	L251
Subbasin: Arkansas-Dodge City (HUC 11030003)		
Lake Charles	Ford	L252
Subbasin: Pawnee (HUC 11030005)		
Concannon State Fishing Lake	Finney	L253
Finney County Game Refuge Lakes	Finney	L254
Subbasin: Buckner (HUC 11030006)		
Ford County Lake	Ford	L256
Hain State Fishing Lake	Ford	L257
Subbasin: Upper Walnut Creek (HUC 11030007)		
Goodman State Fishing Lake	Ness	L259
Subbasin: Lower Walnut Creek (HUC 11030008)		
Barton Lake	Barton	L260
Memorial Park Lake	Barton	L261
Stone Lake	Barton	L262
Basin: Upper Republican		
Subbasin: South Fork Republican (HUC 10250003)		
Saint Francis Wildlife Area Lakes	Cheyenne	L263
Subbasin: South Fork Beaver (HUC 10250012)		
Atwood Township Lake	Rawlins	L264

Lake name	County	Waterbody No.
Subbasin: Prairie Dog (HUC 10250015)		
Colby City Pond	Thomas	L265
Basin: Verdigris Subbasin: Upper Verdigris (HUC 11070101)		
New Yates Center Reservoir	Woodson	L269
Quarry Lake	Wilson	L270
Thayer New City Lake	Neosho	L271
Wilson County State Fishing Lake	Wilson	L274
Woodson County State Fishing Lake	Woodson	L275
Subbasin: Middle Verdigris (HUC 11070103)		
La Claire Lake	Montgomery	L281
Montgomery County State Fishing Lake	Montgomery	L282
Pfister Park Lakes	Montgomery	L283
Subbasin: Elk (HUC 11070104)		
Moline City Lake #2	Elk	L285
Polk Daniels (Elk) State Fishing Lake	Elk	L288
Subbasin: Caney (HUC 11070106)		
Caney City Lake	Chautauqua	L289
Sedan City Lake, North	Chautauqua	L290
Basin: Walnut Subbasin: Lower Walnut River (HUC 11030018)		
Butler County State Fishing Lake	Butler	L297
Winfield Park Lagoon	Cowley	L299
Total = 164		

(i) Water quality standard variances. (1) The Regional Administrator, EPA Region 7, is authorized to grant variances from the water quality standards in paragraphs (f) and (g) of this section where the requirements of this paragraph (h) are met. A water quality standard variance applies only to the permittee requesting the variance and only to the pollutant or pollutants specified in the variance; the underlying water quality standard otherwise remains in effect.

(2) A water quality standard variance shall not be granted if:

(i) Standards will be attained by implementing effluent limitations required under sections 301(b) and 306 of the CWA and by the permittee implementing reasonable best management practices for nonpoint source control; or

(ii) The variance would likely jeopardize the continued existence of any threatened or endangered species listed under section 4 of the Endangered Species Act or result in the destruction or adverse modification of such species' critical habitat.

(3) Subject to paragraph (b)(2) of this section, a water quality standards variance may be granted if the applicant demonstrates to EPA that attaining the water quality standard is not feasible because:

(i) Naturally occurring pollutant concentrations prevent the attainment of the use; or

(ii) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or

(iii) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

(iv) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way which would result in the attainment of the use; or

(v) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like unrelated to water quality, preclude attainment of aquatic life protection uses; or

(vi) Controls more stringent than those required by sections 301(b) and 306 of the CWA would result in substantial and widespread economic and social impact.

(4) Procedures. An applicant for a water quality standards variance shall submit a request to the Regional Administrator of EPA Region 7. The application shall include all relevant information showing that the requirements for a variance have been satisfied. The burden is on the applicant to demonstrate to EPA's satisfaction that the designated use is unattainable for one of the reasons specified in paragraph (i)(3) of this section. If the Regional Administrator preliminarily determines that grounds exist for granting a variance, he shall provide public notice of the proposed variance and provide an opportunity for public comment. Any activities required as a condition of the Regional Administrator's granting of a variance shall be included as conditions of the NPDES permit for the applicant. These terms and conditions shall be incorporated into the applicant's NPDES permit through the permit reissuance process or through a modification of the permit pursuant to the applicable

permit modification provisions of Kansas' NPDES program.

(5) A variance may not exceed 3 years or the term of the NPDES permit, whichever is less. A variance may be renewed if the applicant reapplies and demonstrates that the use in question is still not attainable. Renewal of the variance may be denied if the applicant did not comply with the conditions of the original variance, or otherwise does not meet the requirements of this section.

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