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Title 40 —Protection of Environment
Chapter I —Environmental Protection Agency
Subchapter D —Water Programs

Part 131 Water Quality Standards

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PART 131—WATER QUALITY STANDARDS

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Subpart A—General Provisions

§ 131.1 Scope.

This part describes the requirements and procedures for developing, reviewing, revising, and approving water quality standards by the States as authorized by section 303(c) of the Clean Water Act. Additional specific procedures for developing, reviewing, revising, and approving water quality standards for Great Lakes States or Great Lakes Tribes (as defined in 40 CFR 132.2) to conform to section 118 of the Clean Water Act and 40 CFR part 132, are provided in 40 CFR part 132.

[60 FR 15386, Mar. 23, 1995]

§ 131.2 Purpose.

A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria that protect the designated uses. States adopt water quality standards to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (the Act). “Serve the purposes of the Act” (as defined in sections 101(a)(2) and 303(c) of the Act) means that water quality standards should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value of public water supplies, propagation of fish, shellfish, and wildlife, recreation in and on the water, and agricultural, industrial, and other purposes including navigation.

Such standards serve the dual purposes of establishing the water quality goals for a specific water body and serve as the regulatory basis for the establishment of water-quality-based treatment controls and strategies beyond the technology-based levels of treatment required by sections 301(b) and 306 of the Act.

[48 FR 51405, Nov. 8, 1983, as amended at 80 FR 51046, Aug. 21, 2015]

§ 131.3 Definitions.

- (a) **The Act** means the Clean Water Act (Pub. L. 92-500, as amended (33 U.S.C. 1251 *et seq.*)).
- (b) **Criteria** are elements of State water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use.
- (c) **Section 304(a) criteria** are developed by EPA under authority of section 304(a) of the Act based on the latest scientific information on the relationship that the effect of a constituent concentration has on particular aquatic species and/or human health. This information is issued periodically to the States as guidance for use in developing criteria.
- (d) **Toxic pollutants** are those pollutants listed by the Administrator under section 307(a) of the Act.
- (e) **Existing uses** are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.
- (f) **Designated uses** are those uses specified in water quality standards for each water body or segment whether or not they are being attained.
- (g) **Use attainability analysis** is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in § 131.10(g).
- (h) **Water quality limited segment** means any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act.
- (i) **Water quality standards** are provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act.
- (j) **States** include: The 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, and Indian Tribes that EPA determines to be eligible for purposes of the water quality standards program.
- (k) **Federal Indian Reservation, Indian Reservation, or Reservation** means all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation."
- (l) **Indian Tribe or Tribe** means any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.
- (m) **Highest attainable use** is the modified aquatic life, wildlife, or recreation use that is both closest to the uses specified in section 101(a)(2) of the Act and attainable, based on the evaluation of the factor(s) in § 131.10(g) that preclude(s) attainment of the use and any other information or analyses that were used to evaluate attainability. There is no required highest attainable use where the State demonstrates the relevant use specified in section 101(a)(2) of the Act and sub-categories of such a use are not attainable.
- (n) **Practicable** , in the context of § 131.12(a)(2)(ii), means technologically possible, able to be put into practice, and economically viable.

- (o) A *water quality standards variance* (WQS variance) is a time-limited designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflect the highest attainable condition during the term of the WQS variance.
- (p) **Pollutant Minimization Program**, in the context of § 131.14, is a structured set of activities to improve processes and pollutant controls that will prevent and reduce pollutant loadings.
- (q) **Non-101(a)(2) use** is any use unrelated to the protection and propagation of fish, shellfish, wildlife or recreation in or on the water.
- (r) **Tribal reserved rights**, for purposes of this part, are any rights to CWA-protected aquatic and/or aquatic-dependent resources reserved by right holders, either expressly or implicitly, through Federal treaties, statutes, or Executive orders.
- (s) **Right holders**, for purposes of this part, are any Federally recognized Tribes holding Tribal reserved rights, regardless of whether the Tribe exercises authority over a Federal Indian reservation.

[48 FR 51405, Nov. 8, 1983, as amended at 56 FR 64893, Dec. 12, 1991; 59 FR 64344, Dec. 14, 1994; 80 FR 51046, Aug. 21, 2015; 89 FR 35747, May 2, 2024]

§ 131.4 State authority.

- (a) States (as defined in § 131.3) are responsible for reviewing, establishing, and revising water quality standards. As recognized by section 510 of the Clean Water Act, States may develop water quality standards more stringent than required by this regulation. Consistent with section 101(g) and 518(a) of the Clean Water Act, water quality standards shall not be construed to supersede or abrogate rights to quantities of water.
- (b) States (as defined in § 131.3) may issue certifications pursuant to the requirements of Clean Water Act section 401. Revisions adopted by States shall be applicable for use in issuing State certifications consistent with the provisions of § 131.21(c).
- (c) Where EPA determines that a Tribe is eligible to the same extent as a State for purposes of water quality standards, the Tribe likewise is eligible to the same extent as a State for purposes of certifications conducted under Clean Water Act section 401.

[56 FR 64893, Dec. 12, 1991, as amended at 59 FR 64344, Dec. 14, 1994]

§ 131.5 EPA authority.

- (a) Under section 303(c) of the Act, EPA is to review and to approve or disapprove State-adopted water quality standards. The review involves a determination of:
 - (1) Whether the State has adopted designated water uses that are consistent with the requirements of the Clean Water Act;
 - (2) Whether the State has adopted criteria that protect the designated water uses based on sound scientific rationale consistent with § 131.11;
 - (3) Whether the State has adopted an antidegradation policy that is consistent with § 131.12, and whether any State adopted antidegradation implementation methods are consistent with § 131.12;
 - (4) Whether any State adopted WQS variance is consistent with § 131.14;

- (5) Whether any State adopted provision authorizing the use of schedules of compliance for water quality-based effluent limits in NPDES permits is consistent with § 131.15;
 - (6) Whether the State has followed applicable legal procedures for revising or adopting standards;
 - (7) Whether the State standards which do not include the uses specified in section 101(a)(2) of the Act are based upon appropriate technical and scientific data and analyses, and
 - (8) Whether the State submission meets the requirements included in § 131.6 of this part and, for Great Lakes States or Great Lakes Tribes (as defined in 40 CFR 132.2) to conform to section 118 of the Act, the requirements of 40 CFR part 132.
 - (9) Where applicable, whether State adopted water quality standards are consistent with § 131.9.
- (b) If EPA determines that the State's or Tribe's water quality standards are consistent with the factors listed in paragraphs (a)(1) through (9) of this section, EPA approves the standards. EPA must disapprove the State's or Tribe's water quality standards and promulgate Federal standards under section 303(c)(4), and for Great Lakes States or Great Lakes Tribes under section 118(c)(2)(C) of the Act, if State or Tribal adopted standards are not consistent with the factors listed in paragraphs (a)(1) through (9) of this section. EPA may also promulgate a new or revised standard when necessary to meet the requirements of the Act.
- (c) Section 401 of the Clean Water Act authorizes EPA to issue certifications pursuant to the requirements of section 401 in any case where a State or interstate agency has no authority for issuing such certifications.

[48 FR 51405, Nov. 8, 1983, as amended at 56 FR 64894, Dec. 12, 1991; 60 FR 15387, Mar. 23, 1995; 80 FR 51047, Aug. 21, 2015; 89 FR 35747, May 2, 2024]

§ 131.6 Minimum requirements for water quality standards submission.

The following elements must be included in each State's water quality standards submitted to EPA for review:

- (a) Use designations consistent with the provisions of sections 101(a)(2) and 303(c)(2) of the Act.
- (b) Methods used and analyses conducted to support water quality standards revisions.
- (c) Water quality criteria sufficient to protect the designated uses.
- (d) An antidegradation policy consistent with § 131.12.
- (e) Certification by the State Attorney General or other appropriate legal authority within the State that the water quality standards were duly adopted pursuant to State law.
- (f) General information which will aid the Agency in determining the adequacy of the scientific basis of the standards which do not include the uses specified in section 101(a)(2) of the Act as well as information on general policies applicable to State standards which may affect their application and implementation.
- (g) Where applicable, information that will aid the Agency in evaluating whether the submission is consistent with § 131.9, including:
 - (1) Any information provided by right holders about relevant Tribal reserved rights and documentation of how that information was considered; and
 - (2) Data and methods used to develop the water quality standards.

[48 FR 51405, Nov. 8, 1983, as amended at 89 FR 35747, May 2, 2024]

§ 131.7 Dispute resolution mechanism.

- (a) Where disputes between States and Indian Tribes arise as a result of differing water quality standards on common bodies of water, the lead EPA Regional Administrator, as determined based upon OMB circular A-105, shall be responsible for acting in accordance with the provisions of this section.
- (b) The Regional Administrator shall attempt to resolve such disputes where:
 - (1) The difference in water quality standards results in unreasonable consequences;
 - (2) The dispute is between a State (as defined in § 131.3(j) but exclusive of all Indian Tribes) and a Tribe which EPA has determined is eligible to the same extent as a State for purposes of water quality standards;
 - (3) A reasonable effort to resolve the dispute without EPA involvement has been made;
 - (4) The requested relief is consistent with the provisions of the Clean Water Act and other relevant law;
 - (5) The differing State and Tribal water quality standards have been adopted pursuant to State and Tribal law and approved by EPA; and
 - (6) A valid written request has been submitted by either the Tribe or the State.
- (c) Either a State or a Tribe may request EPA to resolve any dispute which satisfies the criteria of paragraph (b) of this section. Written requests for EPA involvement should be submitted to the lead Regional Administrator and must include:
 - (1) A concise statement of the unreasonable consequences that are alleged to have arisen because of differing water quality standards;
 - (2) A concise description of the actions which have been taken to resolve the dispute without EPA involvement;
 - (3) A concise indication of the water quality standards provision which has resulted in the alleged unreasonable consequences;
 - (4) Factual data to support the alleged unreasonable consequences; and
 - (5) A statement of the relief sought from the alleged unreasonable consequences.
- (d) Where, in the Regional Administrator's judgment, EPA involvement is appropriate based on the factors of paragraph (b) of this section, the Regional Administrator shall, within 30 days, notify the parties in writing that he/she is initiating an EPA dispute resolution action and solicit their written response. The Regional Administrator shall also make reasonable efforts to ensure that other interested individuals or groups have notice of this action. Such efforts shall include but not be limited to the following:
 - (1) Written notice to responsible Tribal and State Agencies, and other affected Federal agencies,
 - (2) Notice to the specific individual or entity that is alleging that an unreasonable consequence is resulting from differing standards having been adopted on a common body of water,
 - (3) Public notice in local newspapers, radio, and television, as appropriate,
 - (4) Publication in trade journal newsletters, and

(5) Other means as appropriate.

(e) If in accordance with applicable State and Tribal law an Indian Tribe and State have entered into an agreement that resolves the dispute or establishes a mechanism for resolving a dispute, EPA shall defer to this agreement where it is consistent with the Clean Water Act and where it has been approved by EPA.

(f) EPA dispute resolution actions shall be consistent with one or a combination of the following options:

(1) **Mediation.** The Regional Administrator may appoint a mediator to mediate the dispute. Mediators shall be EPA employees, employees from other Federal agencies, or other individuals with appropriate qualifications.

(i) Where the State and Tribe agree to participate in the dispute resolution process, mediation with the intent to establish Tribal-State agreements, consistent with Clean Water Act section 518(d), shall normally be pursued as a first effort.

(ii) Mediators shall act as neutral facilitators whose function is to encourage communication and negotiation between all parties to the dispute.

(iii) Mediators may establish advisory panels, to consist in part of representatives from the affected parties, to study the problem and recommend an appropriate solution.

(iv) The procedure and schedule for mediation of individual disputes shall be determined by the mediator in consultation with the parties.

(v) If formal public hearings are held in connection with the actions taken under this paragraph, Agency requirements at 40 CFR 25.5 shall be followed.

(2) **Arbitration.** Where the parties to the dispute agree to participate in the dispute resolution process, the Regional Administrator may appoint an arbitrator or arbitration panel to arbitrate the dispute. Arbitrators and panel members shall be EPA employees, employees from other Federal agencies, or other individuals with appropriate qualifications. The Regional administrator shall select as arbitrators and arbitration panel members individuals who are agreeable to all parties, are knowledgeable concerning the requirements of the water quality standards program, have a basic understanding of the political and economic interests of Tribes and States involved, and are expected to fulfill the duties fairly and impartially.

(i) The arbitrator or arbitration panel shall conduct one or more private or public meetings with the parties and actively solicit information pertaining to the effects of differing water quality permit requirements on upstream and downstream dischargers, comparative risks to public health and the environment, economic impacts, present and historical water uses, the quality of the waters subject to such standards, and other factors relevant to the dispute, such as whether proposed water quality criteria are more stringent than necessary to support designated uses, more stringent than natural background water quality or whether designated uses are reasonable given natural background water quality.

(ii) Following consideration of relevant factors as defined in paragraph (f)(2)(i) of this section, the arbitrator or arbitration panel shall have the authority and responsibility to provide all parties and the Regional Administrator with a written recommendation for resolution of the dispute. Arbitration panel recommendations shall, in general, be reached by majority vote. However, where the parties agree to binding arbitration, or where required by the Regional Administrator, recommendations of such arbitration panels may be unanimous decisions. Where binding or

non-binding arbitration panels cannot reach a unanimous recommendation after a reasonable period of time, the Regional Administrator may direct the panel to issue a non-binding decision by majority vote.

- (iii) The arbitrator or arbitration panel members may consult with EPA's Office of General Counsel on legal issues, but otherwise shall have no *ex parte* communications pertaining to the dispute. Federal employees who are arbitrators or arbitration panel members shall be neutral and shall not be predisposed for or against the position of any disputing party based on any Federal Trust responsibilities which their employers may have with respect to the Tribe. In addition, arbitrators or arbitration panel members who are Federal employees shall act independently from the normal hierarchy within their agency.
 - (iv) The parties are not obligated to abide by the arbitrator's or arbitration panel's recommendation unless they voluntarily entered into a binding agreement to do so.
 - (v) If a party to the dispute believes that the arbitrator or arbitration panel has recommended an action contrary to or inconsistent with the Clean Water Act, the party may appeal the arbitrator's recommendation to the Regional Administrator. The request for appeal must be in writing and must include a description of the statutory basis for altering the arbitrator's recommendation.
 - (vi) The procedure and schedule for arbitration of individual disputes shall be determined by the arbitrator or arbitration panel in consultation with parties.
 - (vii) If formal public hearings are held in connection with the actions taken under this paragraph, Agency requirements at 40 CFR 25.5 shall be followed.
- (3) **Dispute resolution default procedure.** Where one or more parties (as defined in paragraph (g) of this section) refuse to participate in either the mediation or arbitration dispute resolution processes, the Regional Administrator may appoint a single official or panel to review available information pertaining to the dispute and to issue a written recommendation for resolving the dispute. Review officials shall be EPA employees, employees from other Federal agencies, or other individuals with appropriate qualifications. Review panels shall include appropriate members to be selected by the Regional Administrator in consultation with the participating parties. Recommendations of such review officials or panels shall, to the extent possible given the lack of participation by one or more parties, be reached in a manner identical to that for arbitration of disputes specified in paragraphs (f)(2)(i) through (f)(2)(vii) of this section.
- (g) **Definitions.** For the purposes of this section:
- (1) **Dispute Resolution Mechanism** means the EPA mechanism established pursuant to the requirements of Clean Water Act section 518(e) for resolving unreasonable consequences that arise as a result of differing water quality standards that may be set by States and Indian Tribes located on common bodies of water.
 - (2) **Parties** to a State-Tribal dispute include the State and the Tribe and may, at the discretion of the Regional Administrator, include an NPDES permittee, citizen, citizen group, or other affected entity.

[56 FR 64894, Dec. 12, 1991, as amended at 59 FR 64344, Dec. 14, 1994]

§ 131.8 Requirements for Indian Tribes to administer a water quality standards program.

- (a) The Regional Administrator, as determined based on OMB Circular A-105, may accept and approve a tribal application for purposes of administering a water quality standards program if the Tribe meets the following criteria:
 - (1) The Indian Tribe is recognized by the Secretary of the Interior and meets the definitions in § 131.3 (k) and (l),
 - (2) The Indian Tribe has a governing body carrying out substantial governmental duties and powers,
 - (3) The water quality standards program to be administered by the Indian Tribe pertains to the management and protection of water resources which are within the borders of the Indian reservation and held by the Indian Tribe, within the borders of the Indian reservation and held by the United States in trust for Indians, within the borders of the Indian reservation and held by a member of the Indian Tribe if such property interest is subject to a trust restriction on alienation, or otherwise within the borders of the Indian reservation, and
 - (4) The Indian Tribe is reasonably expected to be capable, in the Regional Administrator's judgment, of carrying out the functions of an effective water quality standards program in a manner consistent with the terms and purposes of the Act and applicable regulations.
- (b) Requests by Indian Tribes for administration of a water quality standards program should be submitted to the lead EPA Regional Administrator. The application shall include the following information:
 - (1) A statement that the Tribe is recognized by the Secretary of the Interior.
 - (2) A descriptive statement demonstrating that the Tribal governing body is currently carrying out substantial governmental duties and powers over a defined area. The statement should:
 - (i) Describe the form of the Tribal government;
 - (ii) Describe the types of governmental functions currently performed by the Tribal governing body such as, but not limited to, the exercise of police powers affecting (or relating to) the health, safety, and welfare of the affected population, taxation, and the exercise of the power of eminent domain; and
 - (iii) Identify the source of the Tribal government's authority to carry out the governmental functions currently being performed.
 - (3) A descriptive statement of the Indian Tribe's authority to regulate water quality. The statement should include:
 - (i) A map or legal description of the area over which the Indian Tribe asserts authority to regulate surface water quality;
 - (ii) A statement by the Tribe's legal counsel (or equivalent official) which describes the basis for the Tribes assertion of authority and which may include a copy of documents such as Tribal constitutions, by-laws, charters, executive orders, codes, ordinances, and/or resolutions which support the Tribe's assertion of authority; and
 - (iii) An identification of the surface waters for which the Tribe proposes to establish water quality standards.

- (4) A narrative statement describing the capability of the Indian Tribe to administer an effective water quality standards program. The narrative statement should include:
 - (i) A description of the Indian Tribe's previous management experience which may include the administration of programs and services authorized by the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450 *et seq.*), the Indian Mineral Development Act (25 U.S.C. 2101 *et seq.*), or the Indian Sanitation Facility Construction Activity Act (42 U.S.C. 2004a);
 - (ii) A list of existing environmental or public health programs administered by the Tribal governing body and copies of related Tribal laws, policies, and regulations;
 - (iii) A description of the entity (or entities) which exercise the executive, legislative, and judicial functions of the Tribal government;
 - (iv) A description of the existing, or proposed, agency of the Indian Tribe which will assume primary responsibility for establishing, reviewing, implementing and revising water quality standards;
 - (v) A description of the technical and administrative capabilities of the staff to administer and manage an effective water quality standards program or a plan which proposes how the Tribe will acquire additional administrative and technical expertise. The plan must address how the Tribe will obtain the funds to acquire the administrative and technical expertise.
- (5) Additional documentation required by the Regional Administrator which, in the judgment of the Regional Administrator, is necessary to support a Tribal application.
- (6) Where the Tribe has previously qualified for eligibility or "treatment as a state" under a Clean Water Act or Safe Drinking Water Act program, the Tribe need only provide the required information which has not been submitted in a previous application.

(c) ***Procedure for processing an Indian Tribe's application.***

- (1) The Regional Administrator shall process an application of an Indian Tribe submitted pursuant to § 131.8(b) in a timely manner. He shall promptly notify the Indian Tribe of receipt of the application.
- (2) Within 30 days after receipt of the Indian Tribe's application the Regional Administrator shall provide appropriate notice. Notice shall:
 - (i) Include information on the substance and basis of the Tribe's assertion of authority to regulate the quality of reservation waters; and
 - (ii) Be provided to all appropriate governmental entities.
- (3) The Regional Administrator shall provide 30 days for comments to be submitted on the Tribal application. Comments shall be limited to the Tribe's assertion of authority.
- (4) If a Tribe's asserted authority is subject to a competing or conflicting claim, the Regional Administrator, after due consideration, and in consideration of other comments received, shall determine whether the Tribe has adequately demonstrated that it meets the requirements of § 131.8(a)(3).
- (5) Where the Regional Administrator determines that a Tribe meets the requirements of this section, he shall promptly provide written notification to the Indian Tribe that the Tribe is authorized to administer the Water Quality Standards program.

[56 FR 64895, Dec. 12, 1991, as amended at 59 FR 64344, Dec. 14, 1994]

Subpart B—Establishment of Water Quality Standards

§ 131.9 Protection of Tribal reserved rights.

- (a) Where a right holder has asserted a Tribal reserved right in writing to the State and EPA for consideration in establishment of water quality standards, to the extent supported by available data and information, the State must:
 - (1) Take into consideration the use and value of their waters for protecting the Tribal reserved right in adopting or revising designated uses pursuant to § 131.10;
 - (2) Take into consideration the anticipated future exercise of the Tribal reserved right unsuppressed by water quality in establishing relevant water quality standards; and
 - (3) Establish water quality criteria, consistent with § 131.11, to protect the Tribal reserved right where the State has adopted designated uses that either expressly incorporate protection of or encompass the right. This requirement includes developing criteria to protect right holders using at least the same risk level (e.g., cancer risk level, hazard quotient, or illness rate) as the State would otherwise use to develop criteria to protect the State's general population, paired with exposure inputs (e.g., fish consumption rate) representative of right holders exercising their reserved right.
- (b) States and right holders may request EPA assistance with evaluating Tribal reserved rights. EPA will provide such assistance to the extent practicable. In providing assistance to States as they adopt and revise water quality standards consistent with paragraph (a) of this section, EPA will engage with right holders.
- (c) In reviewing State water quality standards submissions under this section, EPA will initiate the Tribal consultation process with the right holders that have asserted their rights for consideration in establishment of water quality standards, consistent with applicable EPA Tribal consultation policies, in determining whether State water quality standards are consistent with paragraph (a) of this section.

[89 FR 35747, May 2, 2024]

§ 131.10 Designation of uses.

- (a) Each State must specify appropriate water uses to be achieved and protected. The classification of the waters of the State must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. If adopting new or revised designated uses other than the uses specified in section 101(a)(2) of the Act, or removing designated uses, States must submit documentation justifying how their consideration of the use and value of water for those uses listed in this paragraph appropriately supports the State's action. A use attainability analysis may be used to satisfy this requirement. In no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the United States.
- (b) In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.
- (c) States may adopt sub-categories of a use and set the appropriate criteria to reflect varying needs of such sub-categories of uses, for instance, to differentiate between cold water and warm water fisheries.

- (d) At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under sections 301(b) and 306 of the Act and cost-effective and reasonable best management practices for nonpoint source control.
- (e) [Reserved]
- (f) States may adopt seasonal uses as an alternative to reclassifying a water body or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria should be adjusted to reflect the seasonal uses, however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season.
- (g) States may designate a use, or remove a use that is *not* an existing use, if the State conducts a use attainability analysis as specified in paragraph (j) of this section that demonstrates attaining the use is not feasible because of one of the six factors in this paragraph. If a State adopts a new or revised water quality standard based on a required use attainability analysis, the State shall also adopt the highest attainable use, as defined in § 131.3(m).
 - (1) Naturally occurring pollutant concentrations prevent the attainment of the use; or
 - (2) 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
 - (3) 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
 - (4) 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 that would result in the attainment of the use; or
 - (5) 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
 - (6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.
- (h) States may not remove designated uses if:
 - (1) They are existing uses, as defined in § 131.3, unless a use requiring more stringent criteria is added; or
 - (2) Such uses will be attained by implementing effluent limits required under sections 301(b) and 306 of the Act and by implementing cost-effective and reasonable best management practices for nonpoint source control.
- (i) Where existing water quality standards specify designated uses less than those which are presently being attained, the State shall revise its standards to reflect the uses actually being attained.
- (j) A State must conduct a use attainability analysis as described in § 131.3(g), and paragraph (g) of this section, whenever:
 - (1) The State designates for the first time, or has previously designated for a water body, uses that do not include the uses specified in section 101(a)(2) of the Act; or

- (2) The State wishes to remove a designated use that is specified in section 101(a)(2) of the Act, to remove a sub-category of such a use, or to designate a sub-category of such a use that requires criteria less stringent than previously applicable.
- (k) A State is not required to conduct a use attainability analysis whenever:
 - (1) The State designates for the first time, or has previously designated for a water body, uses that include the uses specified in section 101(a)(2) of the Act; or
 - (2) The State designates a sub-category of a use specified in section 101(a)(2) of the Act that requires criteria at least as stringent as previously applicable; or
 - (3) The State wishes to remove or revise a designated use that is a non-101(a)(2) use. In this instance, as required by paragraph (a) of this section, the State must submit documentation justifying how its consideration of the use and value of water for those uses listed in paragraph (a) appropriately supports the State's action, which may be satisfied through a use attainability analysis.

[48 FR 51405, Nov. 8, 1983, as amended at 80 FR 51047, Aug. 21, 2015]

§ 131.11 Criteria.

- (a) **Inclusion of pollutants:**
 - (1) States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use.
 - (2) **Toxic pollutants.** States must review water quality data and information on discharges to identify specific water bodies where toxic pollutants may be adversely affecting water quality or the attainment of the designated water use or where the levels of toxic pollutants are at a level to warrant concern and must adopt criteria for such toxic pollutants applicable to the water body sufficient to protect the designated use. Where a State adopts narrative criteria for toxic pollutants to protect designated uses, the State must provide information identifying the method by which the State intends to regulate point source discharges of toxic pollutants on water quality limited segments based on such narrative criteria. Such information may be included as part of the standards or may be included in documents generated by the State in response to the Water Quality Planning and Management Regulations (40 CFR part 130).
- (b) **Form of criteria:** In establishing criteria, States should:
 - (1) Establish numerical values based on:
 - (i) 304(a) Guidance; or
 - (ii) 304(a) Guidance modified to reflect site-specific conditions; or
 - (iii) Other scientifically defensible methods;
 - (2) Establish narrative criteria or criteria based upon biomonitoring methods where numerical criteria cannot be established or to supplement numerical criteria.

[48 FR 51405, Nov. 8, 1983, as amended at 51047, Aug. 21, 2015]

§ 131.12 Antidegradation policy and implementation methods.

- (a) The State shall develop and adopt a statewide antidegradation policy. The antidegradation policy shall, at a minimum, be consistent with the following:
- (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
 - (2) Where the quality of the waters exceeds levels necessary to support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.
 - (i) The State may identify waters for the protections described in paragraph (a)(2) of this section on a parameter-by-parameter basis or on a water body-by-water body basis. Where the State identifies waters for antidegradation protection on a water body-by-water body basis, the State shall provide an opportunity for public involvement in any decisions about whether the protections described in paragraph (a)(2) of this section will be afforded to a water body, and the factors considered when making those decisions. Further, the State shall not exclude a water body from the protections described in paragraph (a)(2) of this section solely because water quality does not exceed levels necessary to support all of the uses specified in section 101(a)(2) of the Act.
 - (ii) Before allowing any lowering of high water quality, pursuant to paragraph (a)(2) of this section, the State shall find, after an analysis of alternatives, that such a lowering is necessary to accommodate important economic or social development in the area in which the waters are located. The analysis of alternatives shall evaluate a range of practicable alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation.
 - (3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.
 - (4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.
- (b) The State shall develop methods for implementing the antidegradation policy that are, at a minimum, consistent with the State's policy and with paragraph (a) of this section. The State shall provide an opportunity for public involvement during the development and any subsequent revisions of the implementation methods, and shall make the methods available to the public.

[48 FR 51405, Nov. 8, 1983, as amended at 80 FR 51047, Aug. 21, 2015]

§ 131.13 General policies.

States may, at their discretion, include in their State standards, policies generally affecting their application and implementation, such as mixing zones, low flows and variances. Such policies are subject to EPA review and approval.

§ 131.14 Water quality standards variances.

States may adopt WQS variances, as defined in § 131.3(o). Such a WQS variance is subject to the provisions of this section and public participation requirements at § 131.20(b). A WQS variance is a water quality standard subject to EPA review and approval or disapproval.

(a) *Applicability.*

- (1) A WQS variance may be adopted for a permittee(s) or water body/waterbody segment(s), but only applies to the permittee(s) or water body/waterbody segment(s) specified in the WQS variance.
- (2) Where a State adopts a WQS variance, the State must retain, in its standards, the underlying designated use and criterion addressed by the WQS variance, unless the State adopts and EPA approves a revision to the underlying designated use and criterion consistent with §§ 131.10 and 131.11. All other applicable standards not specifically addressed by the WQS variance remain applicable.
- (3) A WQS variance, once adopted by the State and approved by EPA, shall be the applicable standard for purposes of the Act under § 131.21(d) through (e), for the following limited purposes. An approved WQS variance applies for the purposes of developing NPDES permit limits and requirements under 301(b)(1)(C), where appropriate, consistent with paragraph (a)(1) of this section. States and other certifying entities may also use an approved WQS variance when issuing certifications under section 401 of the Act.
- (4) A State may not adopt WQS variances if the designated use and criterion addressed by the WQS variance can be achieved by implementing technology-based effluent limits required under sections 301(b) and 306 of the Act.

(b) *Requirements for Submission to EPA.*

- (1) A WQS variance must include:
 - (i) Identification of the pollutant(s) or water quality parameter(s), and the water body/waterbody segment(s) to which the WQS variance applies. Discharger(s)-specific WQS variances must also identify the permittee(s) subject to the WQS variance.
 - (ii) The requirements that apply throughout the term of the WQS variance. The requirements shall represent the highest attainable condition of the water body or waterbody segment applicable throughout the term of the WQS variance based on the documentation required in (b)(2) of this section. The requirements shall not result in any lowering of the currently attained ambient water quality, unless a WQS variance is necessary for restoration activities, consistent with paragraph (b)(2)(i)(A)(2) of this section. The State must specify the highest attainable condition of the water body or waterbody segment as a quantifiable expression that is one of the following:
 - (A) For discharger(s)-specific WQS variances:

- (1) The highest attainable interim criterion; or
 - (2) The interim effluent condition that reflects the greatest pollutant reduction achievable; or
 - (3) If no additional feasible pollutant control technology can be identified, the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program.
 - (B) For WQS variances applicable to a water body or waterbody segment:
 - (1) The highest attainable interim use and interim criterion; or
 - (2) If no additional feasible pollutant control technology can be identified, the interim use and interim criterion that reflect the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program.
 - (iii) A statement providing that the requirements of the WQS variance are either the highest attainable condition identified at the time of the adoption of the WQS variance, or the highest attainable condition later identified during any reevaluation consistent with paragraph (b)(1)(v) of this section, whichever is more stringent.
 - (iv) The term of the WQS variance, expressed as an interval of time from the date of EPA approval or a specific date. The term of the WQS variance must only be as long as necessary to achieve the highest attainable condition and consistent with the demonstration provided in paragraph (b)(2) of this section. The State may adopt a subsequent WQS variance consistent with this section.
 - (v) For a WQS variance with a term greater than five years, a specified frequency to reevaluate the highest attainable condition using all existing and readily available information and a provision specifying how the State intends to obtain public input on the reevaluation. Such reevaluations must occur no less frequently than every five years after EPA approval of the WQS variance and the results of such reevaluation must be submitted to EPA within 30 days of completion of the reevaluation.
 - (vi) A provision that the WQS variance will no longer be the applicable water quality standard for purposes of the Act if the State does not conduct a reevaluation consistent with the frequency specified in the WQS variance or the results are not submitted to EPA as required by (b)(1)(v) of this section.
- (2) The supporting documentation must include:
- (i) Documentation demonstrating the need for a WQS variance.
 - (A) For a WQS variance to a use specified in section 101(a)(2) of the Act or a sub-category of such a use, the State must demonstrate that attaining the designated use and criterion is not feasible throughout the term of the WQS variance because:
 - (1) One of the factors listed in § 131.10(g) is met, or

- (2) Actions necessary to facilitate lake, wetland, or stream restoration through dam removal or other significant reconfiguration activities preclude attainment of the designated use and criterion while the actions are being implemented.
- (B) For a WQS variance to a non-101(a)(2) use, the State must submit documentation justifying how its consideration of the use and value of the water for those uses listed in § 131.10(a) appropriately supports the WQS variance and term. A demonstration consistent with paragraph (b)(2)(i)(A) of this section may be used to satisfy this requirement.
- (ii) Documentation demonstrating that the term of the WQS variance is only as long as necessary to achieve the highest attainable condition. Such documentation must justify the term of the WQS variance by describing the pollutant control activities to achieve the highest attainable condition, including those activities identified through a Pollutant Minimization Program, which serve as milestones for the WQS variance.
- (iii) In addition to paragraphs (b)(2)(i) and (ii) of this section, for a WQS variance that applies to a water body or waterbody segment:
 - (A) Identification and documentation of any cost-effective and reasonable best management practices for nonpoint source controls related to the pollutant(s) or water quality parameter(s) and water body or waterbody segment(s) specified in the WQS variance that could be implemented to make progress towards attaining the underlying designated use and criterion. A State must provide public notice and comment for any such documentation.
 - (B) Any subsequent WQS variance for a water body or waterbody segment must include documentation of whether and to what extent best management practices for nonpoint source controls were implemented to address the pollutant(s) or water quality parameter(s) subject to the WQS variance and the water quality progress achieved.
- (c) **Implementing WQS variances in NPDES permits.** A WQS variance serves as the applicable water quality standard for implementing NPDES permitting requirements pursuant to § 122.44(d) of this chapter for the term of the WQS variance. Any limitations and requirements necessary to implement the WQS variance shall be included as enforceable conditions of the NPDES permit for the permittee(s) subject to the WQS variance.

[80 FR 51048, Aug. 21, 2015]

§ 131.15 Authorizing the use of schedules of compliance for water quality-based effluent limits in NPDES permits.

If a State intends to authorize the use of schedules of compliance for water quality-based effluent limits in NPDES permits, the State must adopt a permit compliance schedule authorizing provision. Such authorizing provision is a water quality standard subject to EPA review and approval under section 303 of the Act and must be consistent with sections 502(17) and 301(b)(1)(C) of the Act.

[80 FR 51049, Aug. 21, 2015]

Subpart C—Procedures for Review and Revision of Water Quality Standards

§ 131.20 State review and revision of water quality standards.

- (a) **State review.** The State shall from time to time, but at least once every 3 years, hold public hearings for the purpose of reviewing applicable water quality standards adopted pursuant to §§ 131.9 through 131.15 and Federally promulgated water quality standards and, as appropriate, modifying and adopting standards. This review shall include evaluating whether there is any new information available about Tribal reserved rights applicable to State waters that needs to be considered to establish water quality standards consistent with § 131.9. The State shall also re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act every 3 years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly. Procedures States establish for identifying and reviewing water bodies for review should be incorporated into their Continuing Planning Process. In addition, if a State does not adopt new or revised criteria for parameters for which EPA has published new or updated CWA section 304(a) criteria recommendations, then the State shall provide an explanation when it submits the results of its triennial review to the Regional Administrator consistent with CWA section 303(c)(1) and the requirements of paragraph (c) of this section.
- (b) **Public participation.** The State shall hold one or more public hearings for the purpose of reviewing water quality standards as well as when revising water quality standards, in accordance with provisions of State law and EPA's public participation regulation (40 CFR part 25). The proposed water quality standards revision and supporting analyses shall be made available to the public prior to the hearing.
- (c) **Submittal to EPA.** The State shall submit the results of the review, any supporting analysis for the use attainability analysis, the methodologies used for site-specific criteria development, any general policies applicable to water quality standards and any revisions of the standards to the Regional Administrator for review and approval, within 30 days of the final State action to adopt and certify the revised standard, or if no revisions are made as a result of the review, within 30 days of the completion of the review.

[48 FR 51405, Nov. 8, 1983, as amended at 80 FR 51049, Aug. 21, 2015; 89 FR 35748, May 2, 2024]

§ 131.21 EPA review and approval of water quality standards.

- (a) After the State submits its officially adopted revisions, the Regional Administrator shall either:
 - (1) Notify the State within 60 days that the revisions are approved, or
 - (2) Notify the State within 90 days that the revisions are disapproved. Such notification of disapproval shall specify the changes needed to assure compliance with the requirements of the Act and this regulation, and shall explain why the State standard is not in compliance with such requirements. Any new or revised State standard must be accompanied by some type of supporting analysis.
- (b) The Regional Administrator's approval or disapproval of a State water quality standard shall be based on the requirements of the Act as described in §§ 131.5 and 131.6, and, with respect to Great Lakes States or Tribes (as defined in 40 CFR 132.2), 40 CFR part 132.

- (c) **How do I determine which water quality standards are applicable for purposes of the Act?** You may determine which water quality standards are applicable water quality standards for purposes of the Act from the following table:

If—	Then—	Unless or until—	In which case—
(1) A State or authorized Tribe has adopted a water quality standard that is effective under State or Tribal law and has been submitted to EPA before May 30, 2000 the State or Tribe's water quality standard is the applicable water quality standard for purposes of the Act EPA has promulgated a more stringent water quality standard for the State or Tribe that is in effect the EPA-promulgated water quality standard is the applicable water quality standard for purposes of the Act until EPA withdraws the Federal water quality standard.
(2) A State or authorized Tribe adopts a water quality standard that goes into effect under State or Tribal law on or after May 30, 2000 once EPA approves that water quality standard, it becomes the applicable water quality standard for purposes of the Act EPA has promulgated a more stringent water quality standard for the State or Tribe that is in effect the EPA promulgated water quality standard is the applicable water quality standard for purposes of the Act until EPA withdraws the Federal water quality standard.

- (d) **When do I use the applicable water quality standards identified in paragraph (c) above?** Applicable water quality standards for purposes of the Act are the minimum standards which must be used when the CWA and regulations implementing the CWA refer to water quality standards, for example, in identifying impaired waters and calculating TMDLs under section 303(d), developing NPDES permit limitations under section 301(b)(1)(C), evaluating proposed discharges of dredged or fill material under section 404, and in issuing certifications under section 401 of the Act.
- (e) **For how long does an applicable water quality standard for purposes of the Act remain the applicable water quality standard for purposes of the Act?** A State or authorized Tribe's applicable water quality standard for purposes of the Act remains the applicable standard until EPA approves a change, deletion, or addition to that water quality standard, or until EPA promulgates a more stringent water quality standard.
- (f) **How can I find out what the applicable standards are for purposes of the Act?** In each Regional office, EPA maintains a docket system for the States and authorized Tribes in that Region, available to the public, identifying the applicable water quality standards for purposes of the Act.

[48 FR 51405, Nov. 8, 1983, as amended at 60 FR 15387, Mar. 23, 1995; 65 FR 24653, Apr. 27, 2000]

§ 131.22 EPA promulgation of water quality standards.

- (a) If the State does not adopt the changes specified by the Regional Administrator within 90 days after notification of the Regional Administrator's disapproval, the Administrator shall promptly propose and promulgate such standard.

- (b) The Administrator may also propose and promulgate a regulation, applicable to one or more navigable waters, setting forth a new or revised standard upon determining such a standard is necessary to meet the requirements of the Act. To constitute an Administrator's determination that a new or revised standard is necessary to meet the requirements of the Act, such determination must:
 - (1) Be signed by the Administrator or his or her duly authorized delegate, and
 - (2) Contain a statement that the document constitutes an Administrator's determination under section 303(c)(4)(B) of the Act.
- (c) In promulgating water quality standards, the Administrator is subject to the same policies, procedures, analyses, and public participation requirements established for States in these regulations.

[48 FR 51405, Nov. 8, 1983, as amended at 80 FR 51049, Aug. 21, 2015]

Subpart D—Federally Promulgated Water Quality Standards

§ 131.31 Arizona.

- (a) [Reserved]
- (b) The following waters have, in addition to the uses designated by the State, the designated use of fish consumption as defined in R18-11-101 (which is available from the Arizona Department of Environmental Quality, Water Quality Division, 3033 North Central Ave., Phoenix, AZ 85012):

COLORADO MAIN STEM RIVER BASIN:

Hualapai Wash

MIDDLE GILA RIVER BASIN:

Agua Fria River (Camelback Road to Avondale WWTP)

Galena Gulch

Gila River (Felix Road to the Salt River)

Queen Creek (Headwaters to the Superior WWTP)

Queen Creek (Below Potts Canyon)

SAN PEDRO RIVER BASIN:

Copper Creek

SANTA CRUZ RIVER BASIN:

Agua Caliente Wash

Nogales Wash

Sonoita Creek (Above the town of Patagonia)

Tanque Verde Creek

Tinaja Wash

Davidson Canyon

UPPER GILA RIVER BASIN

Chase Creek

- (c) To implement the requirements of R18-11-108.A.5 with respect to effects of mercury on wildlife, EPA (or the State with the approval of EPA) shall implement a monitoring program to assess attainment of the water quality standard.

(Sec. 303, Federal Water Pollution Control Act, as amended, 33 U.S.C. 1313, 86 Stat. 816 *et seq.*, Pub. L. 92-500; Clean Water Act, Pub. L. 92-500, as amended; 33 U.S.C. 1251 *et seq.*)

[41 FR 25000, June 22, 1976; 41 FR 48737, Nov. 5, 1976. Redesignated and amended at 42 FR 56740, Oct. 28, 1977. Further redesignated and amended at 48 FR 51408, Nov. 8, 1983; 61 FR 20693, May 7, 1996; 68 FR 62744, Nov. 6, 2003]

§ 131.32 [Reserved]

§ 131.33 Idaho.

- (a) *Temperature criteria for bull trout.*

- (1) Except for those streams or portions of streams located in Indian country, or as may be modified by the Regional Administrator, EPA Region X, pursuant to paragraph (a)(3) of this section, a temperature criterion of 10 °C, expressed as an average of daily maximum temperatures over a seven-day period, applies to the waterbodies identified in paragraph (a)(2) of this section during the months of June, July, August and September.
- (2) The following waters are protected for bull trout spawning and rearing:
- (i) BOISE-MORE BASIN: Devils Creek, East Fork Sheep Creek, Sheep Creek.
 - (ii) BROWNLEE RESERVOIR BASIN: Crooked River, Indian Creek.
 - (iii) CLEARWATER BASIN: Big Canyon Creek, Cougar Creek, Feather Creek, Laguna Creek, Lolo Creek, Orofino Creek, Talapus Creek, West Fork Potlatch River.
 - (iv) COEUR D'ALENE LAKE BASIN: Cougar Creek, Fernan Creek, Kid Creek, Mica Creek, South Fork Mica Creek, Squaw Creek, Turner Creek.
 - (v) HELLS CANYON BASIN: Dry Creek, East Fork Sheep Creek, Getta Creek, Granite Creek, Kurry Creek, Little Granite Creek, Sheep Creek.
 - (vi) LEMHI BASIN: Adams Creek, Alder Creek, Basin Creek, Bear Valley Creek, Big Eightmile Creek, Big Springs Creek, Big Timber Creek, Bray Creek, Bull Creek, Cabin Creek, Canyon Creek, Carol Creek, Chamberlain Creek, Clear Creek, Climb Creek, Cooper Creek, Dairy Creek, Deer Creek, Deer Park Creek, East Fork Hayden Creek, Eighteenmile Creek, Falls Creek, Ferry Creek, Ford

Creek, Geertson Creek, Grove Creek, Hawley Creek, Hayden Creek, Kadletz Creek, Kenney Creek, Kirtley Creek, Lake Creek, Lee Creek, Lemhi River (above Big Eightmile Creek), Little Eightmile Creek, Little Mill Creek, Little Timber Creek, Middle Fork Little Timber Creek, Milk Creek, Mill Creek, Mogg Creek, North Fork Kirtley Creek, North Fork Little Timber Creek, Paradise Creek, Patterson Creek, Payne Creek, Poison Creek, Prospect Creek, Rocky Creek, Short Creek, Squaw Creek, Squirrel Creek, Tobias Creek, Trail Creek, West Fork Hayden Creek, Wright Creek.

- (vii) LITTLE LOST BASIN: Badger Creek, Barney Creek, Bear Canyon, Bear Creek, Bell Mountain Creek, Big Creek, Bird Canyon, Black Creek, Buck Canyon, Bull Creek, Cedar Run Creek, Chicken Creek, Coal Creek, Corral Creek, Deep Creek, Dry Creek, Dry Creek Canal, Firbox Creek, Garfield Creek, Hawley Canyon, Hawley Creek, Horse Creek, Horse Lake Creek, Iron Creek, Jackson Creek, Little Lost River (above Badger Creek), Mahogany Creek, Main Fork Sawmill Creek, Massacre Creek, Meadow Creek, Mill Creek, Moffett Creek, Moonshine Creek, Quigley Creek, Red Rock Creek, Sands Creek, Sawmill Creek, Slide Creek, Smithie Fork, Squaw Creek, Summerhouse Canyon, Summit Creek, Timber Creek, Warm Creek, Wet Creek, Williams Creek.
- (viii) LITTLE SALMON BASIN: Bascum Canyon, Boulder Creek, Brown Creek, Campbell Ditch, Castle Creek, Copper Creek, Granite Fork Lake Fork Rapid River, Hard Creek, Hazard Creek, Lake Fork Rapid River, Little Salmon River (above Hazard Creek), Paradise Creek, Pony Creek, Rapid River, Squirrel Creek, Trail Creek, West Fork Rapid River.
- (ix) LOCHSA BASIN: Apgar Creek, Badger Creek, Bald Mountain Creek, Beaver Creek, Big Flat Creek, Big Stew Creek, Boulder Creek, Brushy Fork, Cabin Creek, Castle Creek, Chain Creek, Cliff Creek, Coolwater Creek, Cooperation Creek, Crab Creek, Crooked Fork Lochsa River, Dan Creek, Deadman Creek, Doe Creek, Dutch Creek, Eagle Creek, East Fork Papoose Creek, East Fork Split Creek, East Fork Squaw Creek, Eel Creek, Fern Creek, Fire Creek, Fish Creek, Fish Lake Creek, Fox Creek, Gass Creek, Gold Creek, Ham Creek, Handy Creek, Hard Creek, Haskell Creek, Heather Creek, Hellgate Creek, Holly Creek, Hopeful Creek, Hungry Creek, Indian Grave Creek, Jay Creek, Kerr Creek, Kube Creek, Lochsa River, Lone Knob Creek, Lottie Creek, Macaroni Creek, Maud Creek, Middle Fork Clearwater River, No-see-um Creek, North Fork Spruce Creek, North Fork Storm Creek, Nut Creek, Otter Slide Creek, Pack Creek, Papoose Creek, Parachute Creek, Pass Creek, Pedro Creek, Pell Creek, Pete King Creek, Placer Creek, Polar Creek, Postoffice Creek, Queen Creek, Robin Creek, Rock Creek, Rye Patch Creek, Sardine Creek, Shoot Creek, Shotgun Creek, Skookum Creek, Snowshoe Creek, South Fork Spruce Creek, South Fork Storm Creek, Split Creek, Sponge Creek, Spring Creek, Spruce Creek, Squaw Creek, Storm Creek, Tick Creek, Tomcat Creek, Tumble Creek, Twin Creek, Wag Creek, Walde Creek, Walton Creek, Warm Springs Creek, Weir Creek, Wendover Creek, West Fork Boulder Creek, West Fork Papoose Creek, West Fork Squaw Creek, West Fork Wendover Creek, White Sands Creek, Willow Creek.
- (x) LOWER CLARK FORK BASIN: Cascade Creek, East Fork, East Fork Creek, East Forkast Fork Creek, Gold Creek, Johnson Creek, Lightning Creek, Mosquito Creek, Porcupine Creek, Rattle Creek, Spring Creek, Twin Creek, Wellington Creek.
- (xi) LOWER KOOTENAI BASIN: Ball Creek, Boundary Creek, Brush Creek, Cabin Creek, Caribou Creek, Cascade Creek, Cooks Creek, Cow Creek, Curley Creek, Deep Creek, Grass Creek, Jim Creek, Lime Creek, Long Canyon Creek, Mack Creek, Mission Creek, Myrtle Creek, Peak Creek, Snow Creek, Trout Creek.

- (xii) LOWER MIDDLE FORK SALMON BASIN: Acorn Creek, Alpine Creek, Anvil Creek, Arrastra Creek, Bar Creek, Beagle Creek, Beaver Creek, Belvidere Creek, Big Creek, Birdseye Creek, Boulder Creek, Brush Creek, Buck Creek, Bull Creek, Cabin Creek, Camas Creek, Canyon Creek, Castle Creek, Clark Creek, Coin Creek, Corner Creek, Coxey Creek, Crooked Creek, Doe Creek, Duck Creek, East Fork Holy Terror Creek, Fawn Creek, Flume Creek, Fly Creek, Forge Creek, Furnace Creek, Garden Creek, Government Creek, Grouse Creek, Hammer Creek, Hand Creek, Holy Terror Creek, J Fell Creek, Jacobs Ladder Creek, Lewis Creek, Liberty Creek, Lick Creek, Lime Creek, Little Jacket Creek, Little Marble Creek, Little White Goat Creek, Little Woodtick Creek, Logan Creek, Lookout Creek, Loon Creek, Martindale Creek, Meadow Creek, Middle Fork Smith Creek, Monumental Creek, Moore Creek, Mulligan Creek, North Fork Smith Creek, Norton Creek, Placer Creek, Pole Creek, Rams Creek, Range Creek, Routson Creek, Rush Creek, Sawlog Creek, Sheep Creek, Sheldon Creek, Shellrock Creek, Ship Island Creek, Shovel Creek, Silver Creek, Smith Creek, Snowslide Creek, Soldier Creek, South Fork Camas Creek, South Fork Chamberlain Creek, South Fork Holy Terror Creek, South Fork Norton Creek, South Fork Rush Creek, South Fork Sheep Creek, Spider Creek, Spletts Creek, Telephone Creek, Trail Creek, Two Point Creek, West Fork Beaver Creek, West Fork Camas Creek, West Fork Monumental Creek, West Fork Rush Creek, White Goat Creek, Wilson Creek.
- (xiii) LOWER NORTH FORK CLEARWATER BASIN: Adair Creek, Badger Creek, Bathtub Creek, Beaver Creek, Black Creek, Brush Creek, Buck Creek, Butte Creek, Canyon Creek, Caribou Creek, Crimper Creek, Dip Creek, Dog Creek, Elmer Creek, Falls Creek, Fern Creek, Goat Creek, Isabella Creek, John Creek, Jug Creek, Jungle Creek, Lightning Creek, Little Lost Lake Creek, Little North Fork Clearwater River, Lost Lake Creek, Lund Creek, Montana Creek, Mowitch Creek, Papoose Creek, Pitchfork Creek, Rocky Run, Rutledge Creek, Spotted Louis Creek, Triple Creek, Twin Creek, West Fork Montana Creek, Willow Creek.
- (xiv) LOWER SALMON BASIN: Bear Gulch, Berg Creek, East Fork John Day Creek, Elkhorn Creek, Fiddle Creek, French Creek, Hurley Creek, John Day Creek, Kelly Creek, Klip Creek, Lake Creek, Little Slate Creek, Little Van Buren Creek, No Business Creek, North Creek, North Fork Slate Creek, North Fork White Bird Creek, Partridge Creek, Slate Creek, Slide Creek, South Fork John Day Creek, South Fork White Bird Creek, Warm Springs Creek.
- (xv) LOWER SELWAY BASIN: Anderson Creek, Bailey Creek, Browns Spring Creek, Buck Lake Creek, Butte Creek, Butter Creek, Cabin Creek, Cedar Creek, Chain Creek, Chute Creek, Dent Creek, Disgrace Creek, Double Creek, East Fork Meadow Creek, East Fork Moose Creek, Elbow Creek, Fivemile Creek, Fourmile Creek, Gate Creek, Gedney Creek, Goddard Creek, Horse Creek, Indian Hill Creek, Little Boulder Creek, Little Schwar Creek, Matteson Creek, Meadow Creek, Monument Creek, Moose Creek, Moss Creek, Newsome Creek, North Fork Moose Creek, Rhoda Creek, Saddle Creek, Schwar Creek, Shake Creek, Spook Creek, Spur Creek, Tamarack Creek, West Fork Anderson Creek, West Fork Gedney Creek, West Moose Creek, Wounded Doe Creek.
- (xvi) MIDDLE FORK CLEARWATER BASIN: Baldy Creek, Big Cedar Creek, Browns Spring Creek, Clear Creek, Middle Fork Clear Creek, Pine Knob Creek, South Fork Clear Creek.
- (xvii) MIDDLE FORK PAYETTE BASIN: Bull Creek, Middle Fork Payette River (above Fool Creek), Oxtail Creek, Silver Creek, Sixteen-to-one Creek.
- (xviii) MIDDLE SALMON-CHAMBERLAIN BASIN: Arrow Creek, Bargamin Creek, Bat Creek, Bay Creek, Bear Creek, Bend Creek, Big Elkhorn Creek, Big Harrington Creek, Big Mallard Creek, Big Squaw Creek, Bleak Creek, Bronco Creek, Broomtail Creek, Brown Creek, Cayuse Creek, Center Creek, Chamberlain Creek, Cliff Creek, Colt Creek, Corn Creek, Crooked Creek, Deer Creek, Dennis

Creek, Disappointment Creek, Dismal Creek, Dog Creek, East Fork Fall Creek, East Fork Horse Creek, East Fork Noble Creek, Fall Creek, Filly Creek, Fish Creek, Flossie Creek, Game Creek, Gap Creek, Ginger Creek, Green Creek, Grouse Creek, Guard Creek, Hamilton Creek, Horse Creek, Hot Springs Creek, Hotzel Creek, Hungry Creek, Iodine Creek, Jack Creek, Jersey Creek, Kitchen Creek, Lake Creek, Little Horse Creek, Little Lodgepole Creek, Little Mallard Creek, Lodgepole Creek, Mayflower Creek, McCalla Creek, Meadow Creek, Moose Creek, Moose Jaw Creek, Mule Creek, Mustang Creek, No Name Creek, Owl Creek, Poet Creek, Pole Creek, Porcupine Creek, Prospector Creek, Pup Creek, Queen Creek, Rainey Creek, Ranch Creek, Rattlesnake Creek, Red Top Creek, Reynolds Creek, Rim Creek, Ring Creek, Rock Creek, Root Creek, Runaway Creek, Sabe Creek, Saddle Creek, Salt Creek, Schissler Creek, Sheep Creek, Short Creek, Shovel Creek, Skull Creek, Slaughter Creek, Slide Creek, South Fork Cottonwood Creek, South Fork Chamberlain Creek, South Fork Kitchen Creek, South Fork Salmon River, Spread Creek, Spring Creek, Starvation Creek, Steamboat Creek, Steep Creek, Stud Creek, Warren Creek, Webfoot Creek, West Fork Chamberlain Creek, West Fork Rattlesnake Creek, West Horse Creek, Whimstick Creek, Wind River, Woods Fork Horse Creek.

(xix) MIDDLE SALMON-PANTHER BASIN: Allen Creek, Arnett Creek, Beaver Creek, Big Deer Creek, Blackbird Creek, Boulder Creek, Cabin Creek, Camp Creek, Carmen Creek, Clear Creek, Colson Creek, Copper Creek, Corral Creek, Cougar Creek, Cow Creek, Deadhorse Creek, Deep Creek, East Boulder Creek, Elkhorn Creek, Fawn Creek, Fourth Of July Creek, Freeman Creek, Homet Creek, Hughes Creek, Hull Creek, Indian Creek, Iron Creek, Jackass Creek, Jefferson Creek, Jesse Creek, Lake Creek, Little Deep Creek, Little Hat Creek, Little Sheep Creek, McConn Creek, McKim Creek, Mink Creek, Moccasin Creek, Moose Creek, Moyer Creek, Musgrove Creek, Napias Creek, North Fork Hughes Creek, North Fork Iron Creek, North Fork Salmon River, North Fork Williams Creek, Opal Creek, Otter Creek, Owl Creek, Panther Creek, Park Creek, Phelan Creek, Pine Creek, Pony Creek, Porphyry Creek, Pruvan Creek, Rabbit Creek, Rancherio Creek, Rapps Creek, Salt Creek, Salzer Creek, Saw Pit Creek, Sharkey Creek, Sheep Creek, South Fork Cabin Creek, South Fork Iron Creek, South Fork Moyer Creek, South Fork Phelan Creek, South Fork Sheep Creek, South Fork Williams Creek, Spring Creek, Squaw Creek, Trail Creek, Twelvemile Creek, Twin Creek, Weasel Creek, West Fork Blackbird Creek, West Fork Iron Creek, Williams Creek, Woodtick Creek.

(xx) MOYIE BASIN: Brass Creek, Bussard Creek, Copper Creek, Deer Creek, Faro Creek, Keno Creek, Kreist Creek, Line Creek, McDougal Creek, Mill Creek, Moyie River (above Skin Creek), Placer Creek, Rutledge Creek, Skin Creek, Spruce Creek, West Branch Deer Creek.

(xxi) NORTH AND MIDDLE FORK BOISE BASIN: Abby Creek, Arrastra Creek, Bald Mountain Creek, Ballentyne Creek, Banner Creek, Bayhouse Creek, Bear Creek, Bear River, Big Gulch, Big Silver Creek, Billy Creek, Blackwarrior Creek, Bow Creek, Browns Creek, Buck Creek, Cabin Creek, Cahhah Creek, Camp Gulch, China Fork, Coma Creek, Corbus Creek, Cow Creek, Crooked River, Cub Creek, Decker Creek, Dutch Creek, Dutch Frank Creek, East Fork Roaring River, East Fork Swanholm Creek, East Fork Yuba River, Flint Creek, Flytrip Creek, Gotch Creek, Graham Creek, Granite Creek, Grays Creek, Greylock Creek, Grouse Creek, Hot Creek, Hungarian Creek, Joe Daley Creek, Johnson Creek, Kid Creek, King Creek, La Mayne Creek, Leggit Creek, Lightning Creek, Little Queens River, Little Silver Creek, Louise Creek, Lynx Creek, Mattingly Creek, McKay Creek, McLeod Creek, McPhearson Creek, Middle Fork Boise River (above Roaring River), Middle Fork Corbus Creek, Middle Fork Roaring River, Mill Creek, Misfire Creek, Montezuma Creek, North Fork Boise River (above Bear River), Phifer Creek, Pikes Fork, Quartz Gulch, Queens River, Rabbit Creek, Right Creek, Roaring River, Robin Creek, Rock Creek, Rockey Creek, Sawmill

Creek, Scenic Creek, Scotch Creek, Scott Creek, Shorip Creek, Smith Creek, Snow Creek, Snowslide Creek, South Fork Corbus Creek, South Fork Cub Creek, Spout Creek, Steamboat Creek, Steel Creek, Steppe Creek, Swanholm Creek, Timpa Creek, Trail Creek, Trapper Creek, Tripod Creek, West Fork Creek, West Warrior Creek, Willow Creek, Yuba River.

- (xxii) NORTH FORK PAYETTE BASIN: Gold Fork River, North Fork Gold Fork River, Pearsol Creek.
- (xxiii) AHSIMEROI BASIN: Baby Creek, Bear Creek, Big Creek, Big Gulch, Burnt Creek, Christian Gulch, Dead Cat Canyon, Ditch Creek, Donkey Creek, Doublespring Creek, Dry Canyon, Dry Gulch, East Fork Burnt Creek, East Fork Morgan Creek, East Fork Pahsimeroi River, East Fork Patterson Creek, Elkhorn Creek, Falls Creek, Goldberg Creek, Hillside Creek, Inyo Creek, Long Creek, Mahogany Creek, Mill Creek, Morgan Creek, Morse Creek, Mulkey Gulch, North Fork Big Creek, North Fork Morgan Creek, Pahsimeroi River (above Big Creek), Patterson Creek, Rock Spring Canyon, Short Creek, Snowslide Creek, South Fork Big Creek, Spring Gulch, Squaw Creek, Stinking Creek, Tater Creek, West Fork Burnt Creek, West Fork North Fork Big Creek.
- (xxiv) PAYETTE BASIN: Squaw Creek, Third Fork Squaw Creek.
- (xxv) PEND OREILLE LAKE BASIN: Branch North Gold Creek, Cheer Creek, Chloride Gulch, Dry Gulch, Dyree Creek, Flume Creek, Gold Creek, Granite Creek, Grouse Creek, Kick Bush Gulch, North Fork Grouse Creek, North Gold Creek, Plank Creek, Rapid Lightning Creek, South Fork Grouse Creek, Strong Creek, Thor Creek, Trestle Creek, West Branch Pack River, West Gold Creek, Wylie Creek, Zuni Creek.
- (xxvi) PRIEST BASIN: Abandon Creek, Athol Creek, Bath Creek, Bear Creek, Bench Creek, Blacktail Creek, Bog Creek, Boulder Creek, Bugle Creek, Canyon Creek, Caribou Creek, Cedar Creek, Chicopee Creek, Deadman Creek, East Fork Trapper Creek, East River, Fedar Creek, Floss Creek, Gold Creek, Granite Creek, Horton Creek, Hughes Fork, Indian Creek, Jackson Creek, Jost Creek, Kalispell Creek, Kent Creek, Keokee Creek, Lime Creek, Lion Creek, Lost Creek, Lucky Creek, Malcom Creek, Middle Fork East River, Muskegon Creek, North Fork Granite Creek, North Fork Indian Creek, Packer Creek, Rock Creek, Ruby Creek, South Fork Granite Creek, South Fork Indian Creek, South Fork Lion Creek, Squaw Creek, Tango Creek, Tarlac Creek, The Thorofare, Trapper Creek, Two Mouth Creek, Uleda Creek, Priest R. (above Priest Lake), Zero Creek.
- (xxvii) SOUTH FORK BOISE BASIN: Badger Creek, Bear Creek, Bear Gulch, Big Smoky Creek, Big Water Gulch, Boardman Creek, Burnt Log Creek, Cayuse Creek, Corral Creek, Cow Creek, Edna Creek, Elk Creek, Emma Creek, Feather River, Fern Gulch, Grape Creek, Gunsight Creek, Haypress Creek, Heather Creek, Helen Creek, Johnson Creek, Lincoln Creek, Little Cayuse Creek, Little Rattlesnake Creek, Little Skeleton Creek, Little Smoky Creek, Loggy Creek, Mule Creek, North Fork Ross Fork, Pinto Creek, Rattlesnake Creek, Ross Fork, Russel Gulch, Salt Creek, Shake Creek, Skeleton Creek, Slater Creek, Smokey Dome Canyon, South Fork Ross Fork, Three Forks Creek, Tipton Creek, Vienna Creek, Weeks Gulch, West Fork Big Smoky Creek, West Fork Salt Creek, West Fork Skeleton Creek, Willow Creek.
- (xxviii) SOUTH FORK CLEARWATER BASIN: American River, Baker Gulch, Baldy Creek, Bear Creek, Beaver Creek, Big Canyon Creek, Big Elk Creek, Blanco Creek, Boundary Creek, Box Sing Creek, Boyer Creek, Cartwright Creek, Cole Creek, Crooked River, Dawson Creek, Deer Creek, Ditch Creek, East Fork American River, East Fork Crooked River, Elk Creek, Fivemile Creek, Flint Creek, Fourmile Creek, Fox Creek, French Gulch, Galena Creek, Gospel Creek, Hagen Creek, Hays Creek, Johns Creek, Jungle Creek, Kirks Fork American River, Little Elk Creek, Little Moose Creek, Little Siegel Creek, Loon Creek, Mackey Creek, Meadow Creek, Melton Creek, Middle Fork

Red River, Mill Creek, Monroe Creek, Moores Creek, Moores Lake Creek, Moose Butte Creek, Morgan Creek, Mule Creek, Newsome Creek, Nuggett Creek, Otterson Creek, Pat Brennan Creek, Pilot Creek, Quartz Creek, Queen Creek, Rabbit Creek, Rainbow Gulch, Red River, Relief Creek, Ryan Creek, Sally Ann Creek, Sawmill Creek, Schooner Creek, Schwartz Creek, Sharmon Creek, Siegel Creek, Silver Creek, Sixmile Creek, Sixtysix Creek, Snoose Creek, Sourdough Creek, South Fork Red River, Square Mountain Creek, Swale Creek, Swift Creek, Taylor Creek, Tenmile Creek, Trail Creek, Trapper Creek, Trout Creek, Twentymile Creek, Twin Lakes Creek, Umatilla Creek, West Fork Big Elk Creek, West Fork Crooked River, West Fork Gospel Creek, West Fork Newsome Creek, West Fork Red River, West Fork Twentymile Creek, Whiskey Creek, Whitaker Creek, Williams Creek.

(xxix) SOUTH FORK PAYETTE BASIN: Archie Creek, Ash Creek, Baron Creek, Basin Creek, Bear Creek, Beaver Creek, Big Spruce Creek, Bitter Creek, Blacks Creek, Blue Jay Creek, Burn Creek, Bush Creek, Camp Creek, Canyon Creek, Casner Creek, Cat Creek, Chapman Creek, Charters Creek, Clear Creek, Coski Creek, Cup Creek, Dead Man Creek, Deadwood River, Deer Creek, East Fork Deadwood Creek, East Fork Warm Springs Creek, Eby Creek, Elkhorn Creek, Emma Creek, Fall Creek, Fence Creek, Fern Creek, Fivemile Creek, Fox Creek, Garney Creek, Gates Creek, Goat Creek, Grandjem Creek, Grouse Creek, Habit Creek, Helende Creek, Horse Creek, Huckleberry Creek, Jackson Creek, Kettle Creek, Kirkham Creek, Lake Creek, Lick Creek, Little Tenmile Creek, Logging Gulch, Long Creek, MacDonald Creek, Meadow Creek, Middle Fork Warm Springs Creek, Miller Creek, Monument Creek, Moulding Creek, Ninemile Creek, No Man Creek, No Name Creek, North Fork Baron Creek, North Fork Canyon Creek, North Fork Deer Creek, North Fork Whitehawk Creek, O'Keefe Creek, Packsaddle Creek, Park Creek, Pass Creek, Pinchot Creek, Pine Creek, Pitchfork Creek, Pole Creek, Richards Creek, Road Fork Rock Creek, Rock Creek, Rough Creek, Scott Creek, Silver Creek, Sixmile Creek, Smith Creek, Smokey Creek, South Fork Beaver Creek, South Fork Canyon Creek, South Fork Clear Creek, South Fork Payette River (above Rock Creek), South Fork Scott Creek, South Fork Warm Spring Creek, Spring Creek, Steep Creek, Stratton Creek, Topnotch Creek, Trail Creek, Wapiti Creek, Warm Spring Creek, Warm Springs Creek, Whangdoodle Creek, Whitehawk Creek, Wild Buck Creek, Wills Gulch, Wilson Creek, Wolf Creek.

(xxx) SOUTH FORK SALMON BASIN: Alez Creek, Back Creek, Bear Creek, Bishop Creek, Blackmare Creek, Blue Lake Creek, Buck Creek, Buckhorn Bar Creek, Buckhorn Creek, Burgdorf Creek, Burntlog Creek, Cabin Creek, Calf Creek, Camp Creek, Cane Creek, Caton Creek, Cinnabar Creek, Cliff Creek, Cly Creek, Cougar Creek, Cow Creek, Cox Creek, Curtis Creek, Deep Creek, Dollar Creek, Dutch Creek, East Fork South Fork Salmon River, East Fork Zena Creek, Elk Creek, Enos Creek, Falls Creek, Fernan Creek, Fiddle Creek, Fitsum Creek, Flat Creek, Fourmile Creek, Goat Creek, Grimmet Creek, Grouse Creek, Halfway Creek, Hanson Creek, Hays Creek, Holdover Creek, Hum Creek, Indian Creek, Jeanette Creek, Johnson Creek, Josephine Creek, Jungle Creek, Knee Creek, Krassel Creek, Lake Creek, Landmark Creek, Lick Creek, Little Buckhorn Creek, Little Indian Creek, Lodgepole Creek, Loon Creek, Maverick Creek, Meadow Creek, Middle Fork Elk Creek, Missouri Creek, Moose Creek, Mormon Creek, Nasty Creek, Nethker Creek, Nick Creek, No Mans Creek, North Fork Bear Creek, North Fork Buckhorn Creek, North Fork Camp Creek, North Fork Dollar Creek, North Fork Fitsum Creek, North Fork Lake Fork, North Fork Lick Creek, North Fork Riordan Creek, North Fork Six-bit Creek, Oompaul Creek, Paradise Creek, Park Creek, Peanut Creek, Pepper Creek, Phoebe Creek, Piah Creek, Pid Creek, Pilot Creek, Pony Creek, Porcupine Creek, Porphyry Creek, Prince Creek, Profile Creek, Quartz Creek, Reeves Creek, Rice Creek, Riordan Creek, Roaring Creek, Ruby Creek, Rustican Creek, Ryan Creek, Salt Creek, Sand Creek, Secesh River, Sheep Creek, Silver Creek, Sister Creek, Six-Bit Creek, South

Fork Bear Creek, South Fork Blackmare Creek, South Fork Buckhorn Creek, South Fork Cougar Creek, South Fork Elk Creek, South Fork Fitsum Creek, South Fork Fourmile Creek, South Fork Salmon River, South Fork Threemile Creek, Split Creek, Steep Creek, Sugar Creek, Summit Creek, Tamarack Creek, Teepee Creek, Threemile Creek, Trail Creek, Trapper Creek, Trout Creek, Tsum Creek, Two-bit Creek, Tyndall Creek, Vein Creek, Victor Creek, Wardenhoff Creek, Warm Lake Creek, Warm Spring Creek, West Fork Buckhorn Creek, West Fork Elk Creek, West Fork Enos Creek, West Fork Zena Creek, Whangdoodle Creek, Willow Basket Creek, Willow Creek, Zena Creek.

(xxxi) ST. JOE R. BASIN: Bad Bear Creek, Bean Creek, Bear Creek, Beaver Creek, Bedrock Creek, Berge Creek, Bird Creek, Blue Grouse Creek, Boulder Creek, Broadaxe Creek, Bruin Creek, California Creek, Cherry Creek, Clear Creek, Color Creek, Copper Creek, Dolly Creek, Dump Creek, Eagle Creek, East Fork Bluff Creek, East Fork Gold Creek, Emerald Creek, Fishhook Creek, Float Creek, Fly Creek, Fuzzy Creek, Gold Creek, Heller Creek, Indian Creek, Kelley Creek, Malin Creek, Marble Creek, Medicine Creek, Mica Creek, Mill Creek, Mosquito Creek, North Fork Bean Creek, North Fork Saint Joe River, North Fork Simmons Creek, Nugget Creek, Packsaddle Creek, Periwinkle Creek, Prospector Creek, Quartz Creek, Red Cross Creek, Red Ives Creek, Ruby Creek, Saint Joe River (above Siwash Creek), Setzer Creek, Sherlock Creek, Simmons Creek, Siwash Creek, Skookum Creek, Thomas Creek, Thorn Creek, Three Lakes Creek, Timber Creek, Tinear Creek, Trout Creek, Tumbledown Creek, Wahoo Creek, Washout Creek, Wilson Creek, Yankee Bar Creek.

(xxxii) UPPER COEUR D'ALENE BASIN: Brown Creek, Falls Creek, Graham Creek.

(xxxiii) UPPER KOOTENAI BASIN: Halverson Cr, North Callahan Creek, South Callahan Creek, West Fork Keeler Creek

(xxxiv) UPPER MIDDLE FORK SALMON BASIN: Asher Creek, Automatic Creek, Ayers Creek, Baldwin Creek, Banner Creek, Bear Creek, Bear Valley Creek, Bearskin Creek, Beaver Creek, Bernard Creek, Big Chief Creek, Big Cottonwood Creek, Birch Creek, Blue Lake Creek, Blue Moon Creek, Boundary Creek, Bridge Creek, Browning Creek, Buck Creek, Burn Creek, Cabin Creek, Cache Creek, Camp Creek, Canyon Creek, Cap Creek, Cape Horn Creek, Casner Creek, Castle Fork, Casto Creek, Cat Creek, Chokebore Creek, Chuck Creek, Cliff Creek, Cold Creek, Collie Creek, Colt Creek, Cook Creek, Corley Creek, Cornish Creek, Cottonwood Creek, Cougar Creek, Crystal Creek, Cub Creek, Cultus Creek, Dagger Creek, Deer Creek, Deer Horn Creek, Doe Creek, Dry Creek, Duffield Creek, Dynamite Creek, Eagle Creek, East Fork Elk Creek, East Fork Indian Creek, East Fork Mayfield Creek, Elk Creek, Elkhorn Creek, Endoah Creek, Fall Creek, Fawn Creek, Feltham Creek, Fir Creek, Flat Creek, Float Creek, Foresight Creek, Forty-five Creek, Forty-four Creek, Fox Creek, Full Moon Creek, Fuse Creek, Grays Creek, Grenade Creek, Grouse Creek, Gun Creek, Half Moon Creek, Hogback Creek, Honeymoon Creek, Hot Creek, Ibex Creek, Indian Creek, Jose Creek, Kelly Creek, Kerr Creek, Knapp Creek, Kwiskwis Creek, Lime Creek, Lincoln Creek, Little Beaver Creek, Little Cottonwood Creek, Little East Fork Elk Creek, Little Indian Creek, Little Loon Creek, Little Pistol Creek, Lola Creek, Loon Creek, Lucinda Creek, Lucky Creek, Luger Creek, Mace Creek, Mack Creek, Marble Creek, Marlin Creek, Marsh Creek, Mayfield Creek, McHoney Creek, McKee Creek, Merino Creek, Middle Fork Elkhorn Creek, Middle Fork Indian Creek, Middle Fork Salmon River (above Soldier Creek), Mine Creek, Mink Creek, Moonshine Creek, Mowitch Creek, Muskeg Creek, Mystery Creek, Nelson Creek, New Creek, No Name Creek, North Fork Elk Creek, North Fork Elkhorn Creek, North Fork Sheep Creek, North Fork Sulphur Creek, Papoose Creek, Parker Creek, Patrol Creek, Phillips Creek, Pierson Creek, Pinyon Creek, Pioneer Creek, Pistol Creek, Placer Creek, Poker Creek, Pole Creek, Popgun Creek,

Porter Creek, Prospect Creek, Rabbit Creek, Rams Horn Creek, Range Creek, Rapid River, Rat Creek, Remington Creek, Rock Creek, Rush Creek, Sack Creek, Safety Creek, Salt Creek, Savage Creek, Scratch Creek, Seafoam Creek, Shady Creek, Shake Creek, Sheep Creek, Sheep Trail Creek, Shell Creek, Shrapnel Creek, Siah Creek, Silver Creek, Slide Creek, Snowshoe Creek, Soldier Creek, South Fork Cottonwood Creek, South Fork Sheep Creek, Spike Creek, Springfield Creek, Squaw Creek, Sulphur Creek, Sunnyside Creek, Swamp Creek, Tennessee Creek, Thatcher Creek, Thicket Creek, Thirty-two Creek, Tomahawk Creek, Trail Creek, Trapper Creek, Trigger Creek, Twenty-two Creek, Vader Creek, Vanity Creek, Velvet Creek, Walker Creek, Wampum Creek, Warm Spring Creek, West Fork Elk Creek, West Fork Little Loon Creek, West Fork Mayfield Creek, White Creek, Wickiup Creek, Winchester Creek, Winnemucca Creek, Wyoming Creek.

(xxxv) UPPER NORTH FORK CLEARWATER BASIN: Adams Creek, Avalanche Creek, Bacon Creek, Ball Creek, Barn Creek, Barnard Creek, Barren Creek, Bear Creek, Beaver Dam Creek, Bedrock Creek, Bill Creek, Bostonian Creek, Boundary Creek, Burn Creek, Butter Creek, Camp George Creek, Canyon Creek, Cayuse Creek, Chamberlain Creek, Clayton Creek, Cliff Creek, Coffee Creek, Cold Springs Creek, Collins Creek, Colt Creek, Cool Creek, Copper Creek, Corral Creek, Cougar Creek, Craig Creek, Crater Creek, Cub Creek, Davis Creek, Deadwood Creek, Deer Creek, Dill Creek, Drift Creek, Elizabeth Creek, Fall Creek, Fire Creek, Fix Creek, Flame Creek, Fly Creek, Fourth of July Creek, Fro Creek, Frog Creek, Frost Creek, Gilfillian Creek, Goose Creek, Grass Creek, Gravey Creek, Grizzly Creek, Hanson Creek, Heather Creek, Henry Creek, Hidden Creek, Howard Creek, Independence Creek, Jam Creek, Japanese Creek, Johnagan Creek, Johnny Creek, Junction Creek, Kelly Creek, Kid Lake Creek, Kodiak Creek, Lake Creek, Laundry Creek, Lightning Creek, Little Moose Creek, Little Weitas Creek, Liz Creek, Long Creek, Marten Creek, Meadow Creek, Middle Creek, Middle North Fork Kelly Creek, Mill Creek, Mire Creek, Monroe Creek, Moose Creek, Negro Creek, Nettle Creek, Niagra Gulch, North Fork Clearwater River (Fourth of July Creek), Nub Creek, Osier Creek, Perry Creek, Pete Ott Creek, Placer Creek, Polar Creek, Post Creek, Potato Creek, Quartz Creek, Rapid Creek, Rawhide Creek, Roaring Creek, Rock Creek, Rocky Ridge Creek, Ruby Creek, Saddle Creek, Salix Creek, Scurry Creek, Seat Creek, Short Creek, Shot Creek, Siam Creek, Silver Creek, Skull Creek, Slide Creek, Smith Creek, Snow Creek, South Fork Kelly Creek, Spud Creek, Spy Creek, Stolen Creek, Stove Creek, Sugar Creek, Swamp Creek, Tinear Creek, Tinkle Creek, Toboggan Creek, Trail Creek, Vanderbilt Gulch, Wall Creek, Weitas Creek, Williams Creek, Windy Creek, Wolf Creek, Young Creek.

(xxxvi) UPPER SALMON BASIN: Alder Creek, Alpine Creek, Alta Creek, Alturas Lake Creek, Anderson Creek, Aspen Creek, Basin Creek, Bayhorse Creek, Bear Creek, Beaver Creek, Big Boulder Creek, Block Creek, Blowfly Creek, Blue Creek, Boundary Creek, Bowery Creek, Broken Ridge Creek, Bruno Creek, Buckskin Creek, Cabin Creek, Camp Creek, Cash Creek, Challis Creek, Chamberlain Creek, Champion Creek, Cherry Creek, Cinnabar Creek, Cleveland Creek, Coal Creek, Crooked Creek, Darling Creek, Deadwood Creek, Decker Creek, Deer Creek, Dry Creek, Duffy Creek, East Basin Creek, East Fork Salmon River, East Fork Valley Creek, East Pass Creek, Eddy Creek, Eightmile Creek, Elevenmile Creek, Elk Creek, Ellis Creek, Estes Creek, First Creek, Fisher Creek, Fishhook Creek, Fivemile Creek, Fourth of July Creek, Frenchman Creek, Garden Creek, Germania Creek, Goat Creek, Gold Creek, Gooseberry Creek, Greylock Creek, Hay Creek, Hell Roaring Creek, Herd Creek, Huckleberry Creek, Iron Creek, Job Creek, Jordan Creek, Juliette Creek, Kelly Creek, Kinnikinic Creek, Lick Creek, Lightning Creek, Little Basin Creek, Little Beaver Creek, Little Boulder Creek, Little West Fork Morgan Creek, Lodgepole Creek, Lone Pine Creek, Lost Creek, MacRae Creek, Martin Creek, McKay Creek, Meadow Creek, Mill Creek, Morgan Creek, Muley Creek, Ninemile Creek, Noho Creek, Pack Creek, Park Creek, Pat Hughes Creek, Pig

Creek, Pole Creek, Pork Creek, Prospect Creek, Rainbow Creek, Redfish Lake Creek, Road Creek, Rough Creek, Sage Creek, Sagebrush Creek, Salmon River (Redfish Lake Creek), Sawmill Creek, Second Creek, Sevenmile Creek, Sheep Creek, Short Creek, Sixmile Creek, Slate Creek, Smiley Creek, South Fork East Fork Salmon River, Squaw Creek, Stanley Creek, Stephens Creek, Summit Creek, Sunday Creek, Swimm Creek, Taylor Creek, Tenmile Creek, Tennial Creek, Thompson Creek, Three Cabins Creek, Trail Creek, Trap Creek, Treavor Creek, Twelvemile Creek, Twin Creek, Valley Creek, Van Horn Creek, Vat Creek, Warm Spring Creek, Warm Springs Creek, Washington Creek, West Beaver Creek, West Fork Creek, West Fork East Fork Salmon River, West Fork Herd Creek, West Fork Morgan Creek, West Fork Yankee Fork, West Pass Creek, Wickiup Creek, Williams Creek, Willow Creek, Yankee Fork.

(xxxvii) UPPER SELWAY BASIN: Basin Creek, Bear Creek, Burn Creek, Camp Creek, Canyon Creek, Cliff Creek, Comb Creek, Cooper Creek, Cub Creek, Deep Creek, Eagle Creek, Elk Creek, Fall Creek, Fox Creek, Goat Creek, Gold Pan Creek, Granite Creek, Grass Gulch, Haystack Creek, Hells Half Acre Creek, Indian Creek, Kim Creek, Lake Creek, Langdon Gulch, Little Clearwater River, Lodge Creek, Lunch Creek, Mist Creek, Paloma Creek, Paradise Creek, Peach Creek, Pettibone Creek, Running Creek, Saddle Gulch, Schofield Creek, Selway River (above Pettibone Creek), South Fork Running Creek, South Fork Saddle Gulch, South Fork Surprise Creek, Spruce Creek, Squaw Creek, Stripe Creek, Surprise Creek, Set Creek, Teepee Creek, Thirteen Creek, Three Lakes Creek, Triple Creek, Wahoo Creek, White Cap Creek, Wilkerson Creek, Witter Creek.

(xxxviii) WEISER BASIN: Anderson Creek, Bull Corral Creek, Dewey Creek, East Fork Weiser River, Little Weiser River, above Anderson Creek, Sheep Creek, Wolf Creek.

(3) Procedures for site specific modification of listed waterbodies or temperature criteria for bull trout.

- (i) The Regional Administrator may, in his discretion, determine that the temperature criteria in paragraph (a)(1) of this section shall not apply to a specific waterbody or portion thereof listed in paragraph (a)(2) of this section. Any such determination shall be made consistent with § 131.11 and shall be based on a finding that bull trout spawning and rearing is not an existing use in such waterbody or portion thereof.
- (ii) The Regional Administrator may, in his discretion, raise the temperature criteria in paragraph (a)(1) of this section as they pertain to a specific waterbody or portion thereof listed in paragraph (a)(2) of this section. Any such determination shall be made consistent with § 131.11, and shall be based on a finding that bull trout would be fully supported at the higher temperature criteria.
- (iii) For any determination made under paragraphs (a)(3)(i) or (a)(3)(ii) of this section, the Regional Administrator shall, prior to making such a determination, provide for public notice of and comment on a proposed determination. For any such proposed determination, the Regional Administrator shall prepare and make available to the public a technical support document addressing each waterbody or portion thereof that would be deleted or modified and the justification for each proposed determination. This document shall be made available to the public not later than the date of public notice.
- (iv) The Regional Administrator shall maintain and make available to the public an updated list of determinations made pursuant to paragraphs (a)(3)(i) and (a)(3)(ii) of this section as well as the technical support documents for each determination.

- (v) Nothing in this paragraph (a)(3) shall limit the Administrator's authority to modify the temperature criteria in paragraph (a)(1) of this section or the list of waterbodies in paragraph (a)(2) of this section through rulemaking.

(b) [Reserved]

- (c) **Excluded waters.** Lakes, ponds, pools, streams, and springs outside public lands but located wholly and entirely upon a person's land are not protected specifically or generally for any beneficial use, unless such waters are designated in Idaho 16.01.02.110. through 160., or, although not so designated, are waters of the United States as defined at 40 CFR 122.2.

[62 FR 41183, July 31, 1997, as amended at 67 FR 11248, Mar. 13, 2002; 73 FR 65739, Nov. 5, 2008]

§ 131.34 Kansas.

- (a) In addition to the State-adopted use designations, the following water body segment in Kansas is designated for an expected aquatic life use:

Stream segment name	HUC8	Segment #	Designated use
BASIN: MISSOURI			
SUBBASIN: INDEPENDENCE-SUGAR			
Whiskey Creek	10240011	235	Expected Aquatic Life.

- (b) In addition to the State-adopted use designations, the following water body segments and lakes in Kansas are designated for recreation uses as specified in the following table:

Stream segment name	HUC8	Segment #	Designated use
BASIN: CIMARRON			
SUBBASIN: UPPER CIMARRON-BLUFF			
Big Sandy Creek	11040008	6	Primary Contact Recreation
Gyp Creek	11040008	25	Secondary Contact Recreation
Indian Creek	11040008	14	Secondary Contact Recreation
Kiger Creek	11040008	8	Secondary Contact Recreation
Stink Creek	11040008	17	Secondary Contact Recreation
Two Mile Creek	11040008	15	Secondary Contact Recreation
SUBBASIN: LOWER CIMARRON-EAGLE CHIEF			
Anderson Creek	11050001	39	Primary Contact Recreation
BASIN: KANSAS/LOWER REPUBLICAN			
SUBBASIN: MIDDLE REPUBLICAN			
Antelope Creek	10250016	66	Secondary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Ash Creek	10250016	65	Secondary Contact Recreation
Bean Creek	10250016	76	Secondary Contact Recreation
Cora Creek	10250016	51	Secondary Contact Recreation
Crow Creek (Crystal Creek)	10250016	52	Secondary Contact Recreation
Korb Creek	10250016	72	Primary Contact Recreation
Long Branch	10250016	68	Secondary Contact Recreation
Lost Creek	10250016	53	Primary Contact Recreation
Louisa Creek	10250016	61	Secondary Contact Recreation
Norway Creek	10250016	73	Secondary Contact Recreation
Oak Creek	10250016	75	Secondary Contact Recreation
Rebecca Creek	10250016	39	Secondary Contact Recreation
Spring Creek	10250016	71	Secondary Contact Recreation
Spring Creek	10250016	78	Secondary Contact Recreation
Taylor Creek	10250016	74	Secondary Contact Recreation
Walnut Creek	10250016	40	Primary Contact Recreation
Walnut Creek	10250016	46	Secondary Contact Recreation
White Rock Creek, North Branch	10250016	60	Secondary Contact Recreation
Wolf Creek	10250016	67	Secondary Contact Recreation
SUBBASIN: LOWER REPUBLICAN			
Cool Creek	10250017	50	Secondary Contact Recreation
Elm Creek, West Branch	10250017	59	Secondary Contact Recreation
Gar Creek	10250017	12	Primary Contact Recreation
Mud Creek	10250017	63	Secondary Contact Recreation
Turkey Creek	10250017	51	Secondary Contact Recreation
SUBBASIN: UPPER KANSAS			
Dry Creek	10270101	19	Primary Contact Recreation
Humbolt Creek	10270101	10	Primary Contact Recreation
Kitten Creek	10270101	14	Primary Contact Recreation
Little Arkansas Creek	10270101	13	Primary Contact Recreation
Little Kitten Creek	10270101	16	Primary Contact Recreation
Mulberry Creek	10270101	20	Secondary Contact Recreation
SUBBASIN: MIDDLE KANSAS			
Adams Creek	10270102	53	Secondary Contact Recreation
Bartlett Creek	10270102	55	Secondary Contact Recreation
Big Elm Creek	10270102	90	Secondary Contact Recreation
Blackjack Creek	10270102	64	Secondary Contact Recreation
Blacksmith Creek	10270102	102	Secondary Contact Recreation
Bourbonais Creek	10270102	63	Primary Contact Recreation
Brush Creek	10270102	57	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Coal Creek	10270102	46	Secondary Contact Recreation
Coryell Creek	10270102	94	Secondary Contact Recreation
Cow Creek	10270102	45	Secondary Contact Recreation
Crow Creek	10270102	86	Primary Contact Recreation
Darnells Creek	10270102	51	Secondary Contact Recreation
Dog Creek	10270102	78	Secondary Contact Recreation
Doyle Creek	10270102	69	Primary Contact Recreation
Dry Creek	10270102	79	Primary Contact Recreation
Dutch Creek	10270102	92	Secondary Contact Recreation
Elm Creek	10270102	98	Primary Contact Recreation
Elm Creek	10270102	103	Secondary Contact Recreation
Elm Slough	10270102	58	Secondary Contact Recreation
Emmons Creek	10270102	66	Secondary Contact Recreation
French Creek	10270102	19	Primary Contact Recreation
Gilson Creek	10270102	47	Secondary Contact Recreation
Hendricks Creek	10270102	73	Primary Contact Recreation
Hise Creek	10270102	43	Secondary Contact Recreation
Indian Creek	10270102	20	Secondary Contact Recreation
James Creek	10270102	87	Secondary Contact Recreation
Jim Creek	10270102	52	Secondary Contact Recreation
Johnson Creek	10270102	84	Secondary Contact Recreation
Kuenzli Creek	10270102	82	Secondary Contact Recreation
Little Cross Creek	10270102	61	Secondary Contact Recreation
Little Muddy Creek	10270102	99	Primary Contact Recreation
Loire Creek	10270102	80	Primary Contact Recreation
Lost Creek	10270102	60	Secondary Contact Recreation
Messhoss Creek	10270102	96	Primary Contact Recreation
Mud Creek	10270102	44	Secondary Contact Recreation
Mud Creek	10270102	56	Secondary Contact Recreation
Muddy Creek, West Fork	10270102	93	Secondary Contact Recreation
Mulberry Creek	10270102	42	Secondary Contact Recreation
Mulberry Creek	10270102	77	Secondary Contact Recreation
Nehring Creek	10270102	81	Primary Contact Recreation
Paw Paw Creek	10270102	75	Secondary Contact Recreation
Pleasant Hill Run Creek	10270102	23	Primary Contact Recreation
Pomeroy Creek	10270102	59	Secondary Contact Recreation
Post Creek	10270102	101	Secondary Contact Recreation
Pretty Creek	10270102	74	Secondary Contact Recreation
Rock Creek	10270102	21	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Rock Creek, East Fork	10270102	22	Secondary Contact Recreation
Ross Creek	10270102	35	Secondary Contact Recreation
Salt Creek	10270102	88	Secondary Contact Recreation
Sand Creek	10270102	65	Secondary Contact Recreation
Shunganunga Creek, South Branch	10270102	106	Primary Contact Recreation
Snake Creek	10270102	95	Secondary Contact Recreation
Snokomo Creek	10270102	85	Secondary Contact Recreation
Spring Creek	10270102	48	Secondary Contact Recreation
Spring Creek	10270102	54	Primary Contact Recreation
Spring Creek	10270102	76	Secondary Contact Recreation
Spring Creek	10270102	105	Secondary Contact Recreation
Sullivan Creek	10270102	89	Primary Contact Recreation
Tecumseh Creek	10270102	107	Secondary Contact Recreation
Turkey Creek	10270102	71	Primary Contact Recreation
Unnamed Stream	10270102	8	Secondary Contact Recreation
Vassar Creek	10270102	100	Secondary Contact Recreation
Vermillion Creek	10270102	15	Primary Contact Recreation
Walnut Creek	10270102	91	Secondary Contact Recreation
Wells Creek	10270102	68	Secondary Contact Recreation
Whetstone Creek	10270102	104	Secondary Contact Recreation
Wilson Creek	10270102	50	Primary Contact Recreation
Wolf Creek	10270102	49	Primary Contact Recreation

SUBBASIN: DELAWARE

Banner Creek	10270103	45	Secondary Contact Recreation
Barnes Creek	10270103	39	Secondary Contact Recreation
Bills Creek	10270103	47	Secondary Contact Recreation
Brush Creek	10270103	44	Secondary Contact Recreation
Brush Creek	10270103	54	Primary Contact Recreation
Burr Oak Branch	10270103	8	Primary Contact Recreation
Catamount Creek	10270103	49	Primary Contact Recreation
Cedar Creek, North	10270103	46	Primary Contact Recreation
Claywell Creek	10270103	56	Primary Contact Recreation
Clear Creek	10270103	19	Primary Contact Recreation
Coal Creek	10270103	50	Primary Contact Recreation
Grasshopper Creek	10270103	18	Primary Contact Recreation
Grasshopper Creek	10270103	20	Primary Contact Recreation
Gregg Creek	10270103	24	Primary Contact Recreation
Honey Creek	10270103	55	Secondary Contact Recreation
Little Grasshopper Creek	10270103	16	Secondary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Little Wild Horse Creek	10270103	57	Primary Contact Recreation
Mission Creek	10270103	40	Primary Contact Recreation
Nebo Creek	10270103	48	Secondary Contact Recreation
Negro Creek	10270103	43	Secondary Contact Recreation
Otter Creek	10270103	41	Secondary Contact Recreation
Plum Creek	10270103	36	Secondary Contact Recreation
Rock Creek	10270103	34	Primary Contact Recreation
Rock Creek	10270103	53	Primary Contact Recreation
Spring Creek	10270103	42	Primary Contact Recreation
Squaw Creek	10270103	38	Secondary Contact Recreation
Straight Creek	10270103	28	Secondary Contact Recreation
Tick Creek	10270103	52	Primary Contact Recreation
Unnamed Stream	10270103	31	Secondary Contact Recreation
Walnut Creek	10270103	51	Primary Contact Recreation
Wolfley Creek	10270103	27	Secondary Contact Recreation

SUBBASIN: LOWER KANSAS

Baldwin Creek	10270104	69	Secondary Contact Recreation
Brush Creek	10270104	49	Secondary Contact Recreation
Brush Creek, West	10270104	46	Secondary Contact Recreation
Buttermilk Creek	10270104	44	Secondary Contact Recreation
Camp Creek	10270104	41	Secondary Contact Recreation
Camp Creek	10270104	74	Secondary Contact Recreation
Captain Creek	10270104	72	Primary Contact Recreation
Chicken Creek	10270104	79	Secondary Contact Recreation
Clear Creek	10270104	383	Primary Contact Recreation
Cow Creek	10270104	58	Secondary Contact Recreation
Crooked Creek	10270104	10	Primary Contact Recreation
Crooked Creek	10270104	12	Primary Contact Recreation
Dawson Creek	10270104	45	Secondary Contact Recreation
Elk Creek	10270104	68	Primary Contact Recreation
Full Creek	10270104	52	Primary Contact Recreation
Hanson Creek	10270104	437	Secondary Contact Recreation
Hog Creek	10270104	54	Secondary Contact Recreation
Howard Creek	10270104	43	Secondary Contact Recreation
Hulls Branch	10270104	42	Secondary Contact Recreation
Indian Creek	10270104	48	Secondary Contact Recreation
Jarbalo Creek	10270104	51	Secondary Contact Recreation
Kent Creek	10270104	73	Secondary Contact Recreation
Kill Creek	10270104	37	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Little Cedar Creek	10270104	76	Primary Contact Recreation
Little Mill Creek	10270104	78	Primary Contact Recreation
Little Turkey Creek	10270104	62	Primary Contact Recreation
Little Wakarusa Creek	10270104	71	Primary Contact Recreation
Mission Creek, East	10270104	61	Secondary Contact Recreation
Ninemile Creek	10270104	15	Secondary Contact Recreation
Ninemile Creek	10270104	17	Primary Contact Recreation
Oakley Creek	10270104	56	Secondary Contact Recreation
Plum Creek	10270104	50	Secondary Contact Recreation
Prairie Creek	10270104	47	Secondary Contact Recreation
Rock Creek	10270104	35	Primary Contact Recreation
Scatter Creek	10270104	13	Secondary Contact Recreation
Spoon Creek	10270104	75	Secondary Contact Recreation
Stone Horse Creek	10270104	57	Secondary Contact Recreation
Stranger Creek	10270104	7	Primary Contact Recreation
Stranger Creek	10270104	8	Primary Contact Recreation
Stranger Creek	10270104	9	Primary Contact Recreation
Tonganoxie Creek	10270104	14	Primary Contact Recreation
Tooley Creek	10270104	379	Secondary Contact Recreation
Turkey Creek	10270104	77	Primary Contact Recreation
Unnamed Stream	10270104	11	Primary Contact Recreation
Unnamed Stream	10270104	16	Secondary Contact Recreation
Wakarusa River, Middle Branch	10270104	64	Secondary Contact Recreation
Wakarusa River, South Branch	10270104	63	Primary Contact Recreation
Washington Creek	10270104	36	Primary Contact Recreation
Yankee Tank Creek	10270104	70	Primary Contact Recreation
SUBBASIN: LOWER BIG BLUE			
Ackerman Creek	10270205	49	Secondary Contact Recreation
Black Vermillion River, Clear Fork	10270205	9	Primary Contact Recreation
Black Vermillion River, North Fork	10270205	15	Secondary Contact Recreation
Black Vermillion River, South Fork	10270205	12	Secondary Contact Recreation
Bluff Creek	10270205	573	Primary Contact Recreation
Bommer Creek	10270205	40	Secondary Contact Recreation
Busksnort Creek	10270205	566	Secondary Contact Recreation
Carter Creek	10270205	59	Secondary Contact Recreation
Cedar Creek	10270205	56	Secondary Contact Recreation
Corndodger Creek	10270205	52	Primary Contact Recreation
De Shazer Creek	10270205	55	Secondary Contact Recreation
Deadman Creek	10270205	60	Secondary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Deer Creek	10270205	36	Secondary Contact Recreation
Dog Walk Creek	10270205	53	Secondary Contact Recreation
Dutch Creek	10270205	44	Primary Contact Recreation
Elm Creek	10270205	46	Secondary Contact Recreation
Elm Creek, North	10270205	41	Secondary Contact Recreation
Fancy Creek, North Fork	10270205	61	Secondary Contact Recreation
Fancy Creek, West	10270205	29	Primary Contact Recreation
Game Fork	10270205	54	Secondary Contact Recreation
Hop Creek	10270205	43	Secondary Contact Recreation
Indian Creek	10270205	37	Secondary Contact Recreation
Jim Creek	10270205	57	Secondary Contact Recreation
Johnson Fork	10270205	51	Secondary Contact Recreation
Kearney Branch	10270205	58	Secondary Contact Recreation
Lily Creek	10270205	39	Secondary Contact Recreation
Little Indian Creek	10270205	35	Secondary Contact Recreation
Little Timber Creek	10270205	48	Primary Contact Recreation
Meadow Creek	10270205	34	Secondary Contact Recreation
Mission Creek	10270205	22	Primary Contact Recreation
Murdock Creek	10270205	42	Secondary Contact Recreation
Otter Creek	10270205	67	Secondary Contact Recreation
Otter Creek, North	10270205	62	Primary Contact Recreation
Perkins Creek	10270205	47	Secondary Contact Recreation
Phiel Creek	10270205	68	Primary Contact Recreation
Raemer Creek	10270205	33	Primary Contact Recreation
Robidoux Creek	10270205	16	Primary Contact Recreation
Schell Creek	10270205	45	Primary Contact Recreation
School Branch	10270205	63	Secondary Contact Recreation
Scotch Creek	10270205	38	Secondary Contact Recreation
Spring Creek	10270205	19	Primary Contact Recreation
Spring Creek	10270205	65	Primary Contact Recreation
Timber Creek	10270205	64	Primary Contact Recreation
Weyer Creek	10270205	50	Secondary Contact Recreation
SUBBASIN: UPPER LITTLE BLUE			
Dry Creek	10270206	41	Secondary Contact Recreation
SUBBASIN: LOWER LITTLE BLUE			
Ash Creek	10270207	36	Secondary Contact Recreation
Beaver Creek	10270207	38	Secondary Contact Recreation
Bolling Creek	10270207	42	Secondary Contact Recreation
Bowman Creek	10270207	21	Secondary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Buffalo Creek	10270207	32	Secondary Contact Recreation
Camp Creek	10270207	35	Secondary Contact Recreation
Camp Creek	10270207	44	Primary Contact Recreation
Cedar Creek	10270207	40	Secondary Contact Recreation
Cherry Creek	10270207	25	Secondary Contact Recreation
Coon Creek	10270207	23	Primary Contact Recreation
Fawn Creek	10270207	45	Secondary Contact Recreation
Gray Branch	10270207	27	Secondary Contact Recreation
Humphrey Branch	10270207	24	Secondary Contact Recreation
Iowa Creek	10270207	34	Secondary Contact Recreation
Jones Creek	10270207	29	Secondary Contact Recreation
Joy Creek	10270207	13	Secondary Contact Recreation
Lane Branch	10270207	39	Secondary Contact Recreation
Malone Creek	10270207	37	Secondary Contact Recreation
Melvin Creek	10270207	33	Secondary Contact Recreation
Mercer Creek	10270207	43	Primary Contact Recreation
Mill Creek, South Fork	10270207	31	Secondary Contact Recreation
Myer Creek	10270207	26	Secondary Contact Recreation
Riddle Creek	10270207	17	Secondary Contact Recreation
Rose Creek	10270207	12	Secondary Contact Recreation
Salt Creek	10270207	19	Primary Contact Recreation
School Creek	10270207	49	Primary Contact Recreation
Silver Creek	10270207	28	Primary Contact Recreation
Spring Creek	10270207	15	Secondary Contact Recreation
Spring Creek	10270207	30	Secondary Contact Recreation
Walnut Creek	10270207	41	Primary Contact Recreation
BASIN: LOWER ARKANSAS			
SUBBASIN: RATTLESNAKE			
Spring Creek	11030009	7	Secondary Contact Recreation
SUBBASIN: GAR-PEACE			
Gar Creek	11030010	8	Primary Contact Recreation
SUBBASIN: COW			
Blood Creek	11030011	15	Secondary Contact Recreation
Deception Creek	11030011	13	Secondary Contact Recreation
Dry Creek	11030011	22	Primary Contact Recreation
Jarvis Creek	11030011	19	Primary Contact Recreation
Little Cheyenne Creek	11030011	7	Primary Contact Recreation
Little Cow Creek	11030011	2	Primary Contact Recreation
Lost Creek	11030011	17	Secondary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Owl Creek	11030011	18	Primary Contact Recreation
Plum Creek	11030011	4	Secondary Contact Recreation
Salt Creek	11030011	21	Primary Contact Recreation
Spring Creek	11030011	20	Secondary Contact Recreation
SUBBASIN: LITTLE ARKANSAS			
Beaver Creek	11030012	26	Primary Contact Recreation
Bull Creek	11030012	24	Primary Contact Recreation
Dry Creek	11030012	22	Secondary Contact Recreation
Dry Turkey Creek	11030012	13	Primary Contact Recreation
Emma Creek	11030012	6	Primary Contact Recreation
Emma Creek	11030012	7	Primary Contact Recreation
Emma Creek, West	11030012	8	Primary Contact Recreation
Gooseberry Creek	11030012	17	Primary Contact Recreation
Horse Creek	11030012	19	Primary Contact Recreation
Jester Creek	11030012	2	Primary Contact Recreation
Jester Creek, East Fork	11030012	18	Primary Contact Recreation
Kisiwa Creek	11030012	15	Secondary Contact Recreation
Lone Tree Creek	11030012	20	Secondary Contact Recreation
Mud Creek	11030012	16	Primary Contact Recreation
Running Turkey Creek	11030012	25	Secondary Contact Recreation
Salt Creek	11030012	21	Primary Contact Recreation
Sun Creek	11030012	11	Primary Contact Recreation
Turkey Creek	11030012	12	Secondary Contact Recreation
SUBBASIN: MIDDLE ARKANSAS—SLATE			
Antelope Creek	11030013	25	Primary Contact Recreation
Badger Creek	11030013	31	Primary Contact Recreation
Beaver Creek	11030013	29	Primary Contact Recreation
Beaver Creek	11030013	33	Primary Contact Recreation
Big Slough	11030013	11	Primary Contact Recreation
Big Slough, South Fork	11030013	35	Primary Contact Recreation
Bitter Creek	11030013	28	Primary Contact Recreation
Dry Creek	11030013	15	Primary Contact Recreation
Dry Creek	11030013	16	Primary Contact Recreation
Gypsum Creek	11030013	5	Primary Contact Recreation
Hargis Creek	11030013	24	Primary Contact Recreation
Lost Creek	11030013	23	Primary Contact Recreation
Negro Creek	11030013	20	Primary Contact Recreation
Oak Creek	11030013	26	Secondary Contact Recreation
Salt Creek	11030013	22	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Spring Creek	11030013	19	Primary Contact Recreation
Spring Creek	11030013	21	Primary Contact Recreation
Spring Creek	11030013	27	Primary Contact Recreation
Spring Creek	11030013	34	Primary Contact Recreation
Spring Creek	11030013	37	Primary Contact Recreation
Winser Creek	11030013	32	Primary Contact Recreation
SUBBASIN: NORTH FORK NINNESCAH			
Crow Creek	11030014	11	Primary Contact Recreation
Dooleyville Creek	11030014	8	Primary Contact Recreation
Goose Creek	11030014	10	Primary Contact Recreation
Ninnescah River, North Fork	11030014	1	Primary Contact Recreation
Ninnescah River, North Fork	11030014	5	Primary Contact Recreation
Ninnescah River, North Fork	11030014	6	Primary Contact Recreation
Red Rock Creek	11030014	12	Primary Contact Recreation
Rock Creek	11030014	13	Primary Contact Recreation
Silver Creek	11030014	7	Primary Contact Recreation
Spring Creek	11030014	14	Primary Contact Recreation
Wolf Creek	11030014	9	Primary Contact Recreation
SUBBASIN: SOUTH FORK NINNESCAH			
Coon Creek	11030015	9	Primary Contact Recreation
Coon Creek	11030015	17	Primary Contact Recreation
Hunter Creek	11030015	14	Primary Contact Recreation
Mead Creek	11030015	10	Primary Contact Recreation
Mod Creek	11030015	19	Primary Contact Recreation
Natrona Creek	11030015	K38	Primary Contact Recreation
Negro Creek	11030015	13	Primary Contact Recreation
Nester Creek	11030015	15	Primary Contact Recreation
Ninnescah River, West Branch South Fork	11030015	5	Primary Contact Recreation
Painter Creek	11030015	7	Primary Contact Recreation
Pat Creek	11030015	11	Primary Contact Recreation
Petyt Creek	11030015	12	Primary Contact Recreation
Sand Creek	11030015	18	Primary Contact Recreation
Spring Creek	11030015	8	Primary Contact Recreation
Wild Run Creek	11030015	16	Primary Contact Recreation
SUBBASIN: NINNESCAH			
Afton Creek	11030016	5	Primary Contact Recreation
Clearwater Creek	11030016	4	Primary Contact Recreation
Clearwater Creek	11030016	7	Primary Contact Recreation
Dry Creek	11030016	16	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Elm Creek	11030016	10	Primary Contact Recreation
Garvey Creek	11030016	11	Primary Contact Recreation
Sand Creek	11030016	14	Primary Contact Recreation
Silver Creek	11030016	12	Primary Contact Recreation
Spring Creek	11030016	2	Primary Contact Recreation
Spring Creek	11030016	15	Primary Contact Recreation
Turtle Creek	11030016	13	Primary Contact Recreation
SUBBASIN: KAW LAKE			
Blue Branch	11060001	30	Primary Contact Recreation
Bullington Creek	11060001	28	Primary Contact Recreation
Cedar Creek	11060001	32	Primary Contact Recreation
Chilocco Creek	11060001	19	Primary Contact Recreation
Crabb Creek	11060001	29	Primary Contact Recreation
Ferguson Creek	11060001	38	Primary Contact Recreation
Franklin Creek	11060001	35	Primary Contact Recreation
Gardners Branch	11060001	39	Primary Contact Recreation
Goose Creek	11060001	34	Primary Contact Recreation
Myers Creek	11060001	24	Primary Contact Recreation
Otter Creek	11060001	20	Primary Contact Recreation
Pebble Creek	11060001	26	Primary Contact Recreation
Plum Creek	11060001	33	Primary Contact Recreation
Riley Creek	11060001	37	Primary Contact Recreation
School Creek	11060001	31	Primary Contact Recreation
Shellrock Creek	11060001	22	Primary Contact Recreation
Silver Creek	11060001	17	Primary Contact Recreation
Snake Creek	11060001	25	Primary Contact Recreation
Spring Creek	11060001	21	Primary Contact Recreation
Turkey Creek	11060001	27	Primary Contact Recreation
Wagoner Creek	11060001	36	Primary Contact Recreation
SUBBASIN: UPPER SALT FORK ARKANSAS			
Ash Creek	11060002	20	Primary Contact Recreation
Big Sandy Creek	11060002	5	Primary Contact Recreation
Cave Creek	11060002	28	Primary Contact Recreation
Deadman Creek	11060002	22	Primary Contact Recreation
Dog Creek	11060002	29	Primary Contact Recreation
Hackberry Creek	11060002	23	Primary Contact Recreation
Indian Creek	11060002	9	Primary Contact Recreation
Inman Creek	11060002	21	Primary Contact Recreation
Mustang Creek	11060002	31	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Nescatunga Creek, East Branch	11060002	27	Primary Contact Recreation
Red Creek	11060002	16	Primary Contact Recreation
Spring Creek	11060002	24	Primary Contact Recreation
Wildcat Creek	11060002	12	Primary Contact Recreation
Yellowstone Creek	11060002	17	Primary Contact Recreation
SUBBASIN: MEDICINE LODGE			
Amber Creek	11060003	12	Primary Contact Recreation
Antelope Creek	11060003	22	Primary Contact Recreation
Bear Creek	11060003	13	Secondary Contact Recreation
Bitter Creek	11060003	18	Secondary Contact Recreation
Cedar Creek	11060003	20	Primary Contact Recreation
Cottonwood Creek	11060003	16	Primary Contact Recreation
Crooked Creek	11060003	11	Primary Contact Recreation
Little Mule Creek	11060003	9	Primary Contact Recreation
Dry Creek	11060003	21	Secondary Contact Recreation
Elm Creek, East Branch South	11060003	10	Primary Contact Recreation
Elm Creek, North Branch	11060003	4	Primary Contact Recreation
Elm Creek, South Branch	11060003	5	Primary Contact Recreation
Little Bear Creek	11060003	19	Primary Contact Recreation
Medicine Lodge River, North Branch	11060003	24	Secondary Contact Recreation
Mulberry Creek	11060003	14	Primary Contact Recreation
Otter Creek	11060003	25	Secondary Contact Recreation
Puckett Creek	11060003	15	Primary Contact Recreation
Sand Creek	11060003	17	Primary Contact Recreation
Soldier Creek	11060003	27	Secondary Contact Recreation
Stink Creek	11060003	28	Primary Contact Recreation
Turkey Creek	11060003	7	Primary Contact Recreation
Wilson Slough	11060003	23	Primary Contact Recreation
SUBBASIN: LOWER SALT FORK ARKANSAS			
Camp Creek	11060004	68	Primary Contact Recreation
Cooper Creek	11060004	71	Primary Contact Recreation
Crooked Creek	11060004	24	Primary Contact Recreation
Little Sandy Creek	11060004	39	Primary Contact Recreation
Little Sandy Creek, East Branch	11060004	65	Primary Contact Recreation
Osage Creek	11060004	17	Primary Contact Recreation
Plum Creek	11060004	70	Primary Contact Recreation
Pond Creek	11060004	18	Primary Contact Recreation
Rush Creek	11060004	69	Primary Contact Recreation
Salty Creek	11060004	40	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Sandy Creek	11060004	37	Primary Contact Recreation
Sandy Creek, West	11060004	56	Primary Contact Recreation
Spring Creek	11060004	66	Primary Contact Recreation
Unnamed Stream	11060004	25	Primary Contact Recreation
SUBBASIN: CHIKASKIA			
Allen Creek	11060005	40	Primary Contact Recreation
Baehr Creek	11060005	22	Primary Contact Recreation
Beaver Creek	11060005	28	Primary Contact Recreation
Beaver Creek	11060005	46	Primary Contact Recreation
Big Spring Creek	11060005	34	Primary Contact Recreation
Bitter Creek	11060005	4	Primary Contact Recreation
Bitter Creek, East	11060005	16	Primary Contact Recreation
Blue Stem Creek	11060005	48	Primary Contact Recreation
Chicken Creek	11060005	36	Primary Contact Recreation
Copper Creek	11060005	42	Primary Contact Recreation
Dry Creek	11060005	17	Primary Contact Recreation
Duck Creek	11060005	32	Primary Contact Recreation
Fall Creek	11060005	14	Primary Contact Recreation
Fall Creek, East Branch	11060005	27	Primary Contact Recreation
Goose Creek	11060005	38	Primary Contact Recreation
Kemp Creek	11060005	49	Primary Contact Recreation
Long Creek	11060005	529	Primary Contact Recreation
Meridian Creek	11060005	20	Primary Contact Recreation
Prairie Creek	11060005	512	Primary Contact Recreation
Prairie Creek, East	11060005	516	Primary Contact Recreation
Prairie Creek, West	11060005	527	Primary Contact Recreation
Red Creek	11060005	43	Primary Contact Recreation
Rock Creek	11060005	23	Primary Contact Recreation
Rodgers Branch	11060005	26	Primary Contact Recreation
Rose Bud Creek	11060005	44	Primary Contact Recreation
Rush Creek	11060005	45	Primary Contact Recreation
Sand Creek	11060005	11	Primary Contact Recreation
Sand Creek, East	11060005	12	Primary Contact Recreation
Sandy Creek	11060005	30	Primary Contact Recreation
Shoo Fly Creek, East	11060005	19	Secondary Contact Recreation
Shore Creek	11060005	35	Primary Contact Recreation
Silver Creek	11060005	29	Primary Contact Recreation
Skunk Creek	11060005	39	Primary Contact Recreation
Spring Branch	11060005	21	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Wild Horse Creek	11060005	41	Primary Contact Recreation
Wildcat Creek	11060005	24	Primary Contact Recreation

BASIN: MARAIS DES CYGNES

SUBBASIN: UPPER MARAIS DES CYGNES

Appanoose Creek	10290101	16	Primary Contact Recreation
Appanoose Creek, East	10290101	89	Primary Contact Recreation
Batch Creek	10290101	86	Primary Contact Recreation
Blue Creek	10290101	81	Primary Contact Recreation
Bradshaw Creek	10290101	75	Primary Contact Recreation
Cedar Creek	10290101	66	Primary Contact Recreation
Cherry Creek	10290101	74	Primary Contact Recreation
Chicken Creek	10290101	70	Primary Contact Recreation
Chicken Creek	10290101	93	Primary Contact Recreation
Coal Creek	10290101	48	Primary Contact Recreation
Dry Creek	10290101	57	Primary Contact Recreation
Dry Creek	10290101	95	Primary Contact Recreation
Duck Creek	10290101	41	Primary Contact Recreation
Eightmile Creek	10290101	13	Primary Contact Recreation
Frog Creek	10290101	42	Primary Contact Recreation
Hard Fish Creek	10290101	47	Primary Contact Recreation
Hickory Creek	10290101	8	Primary Contact Recreation
Hill Creek	10290101	71	Primary Contact Recreation
Iantha Creek	10290101	62	Primary Contact Recreation
Jersey Creek	10290101	76	Primary Contact Recreation
Kenoma Creek	10290101	64	Primary Contact Recreation
Little Rock Creek	10290101	73	Primary Contact Recreation
Long Creek	10290101	K36	Primary Contact Recreation
Locust Creek	10290101	69	Primary Contact Recreation
Middle Creek	10290101	50	Primary Contact Recreation
Mosquito Creek	10290101	52	Primary Contact Recreation
Mud Creek	10290101	49	Primary Contact Recreation
Mud Creek	10290101	78	Primary Contact Recreation
Mud Creek	10290101	91	Primary Contact Recreation
Mute Creek	10290101	92	Primary Contact Recreation
Ottawa Creek	10290101	K25	Primary Contact Recreation
Plum Creek	10290101	2	Primary Contact Recreation
Plum Creek	10290101	79	Primary Contact Recreation
Popcorn Creek	10290101	87	Primary Contact Recreation
Pottawatomie Creek, North Fork	10290101	65	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Pottawatomie Creek, South Fork	10290101	67	Primary Contact Recreation
Rock Creek	10290101	43	Primary Contact Recreation
Rock Creek	10290101	97	Primary Contact Recreation
Sac Branch, South Fork	10290101	54	Secondary Contact Recreation
Sac Creek	10290101	60	Primary Contact Recreation
Salt Creek	10290101	29	Primary Contact Recreation
Sand Creek	10290101	82	Primary Contact Recreation
Smith Creek	10290101	77	Primary Contact Recreation
Spring Creek	10290101	84	Primary Contact Recreation
Switzler Creek	10290101	80	Primary Contact Recreation
Tauy Creek	10290101	11	Primary Contact Recreation
Tauy Creek, West Fork	10290101	K26	Primary Contact Recreation
Tequa Creek	10290101	44	Primary Contact Recreation
Tequa Creek, East Branch	10290101	46	Primary Contact Recreation
Tequa Creek, South Branch	10290101	45	Primary Contact Recreation
Thomas Creek	10290101	72	Secondary Contact Recreation
Turkey Creek	10290101	4	Primary Contact Recreation
Turkey Creek	10290101	6	Primary Contact Recreation
Unnamed Stream	10290101	5	Primary Contact Recreation
Walnut Creek	10290101	90	Primary Contact Recreation
West Fork Eight Mile Creek	10290101	88	Primary Contact Recreation
Willow Creek	10290101	94	Primary Contact Recreation
Wilson Creek	10290101	83	Primary Contact Recreation
Wolf Creek	10290101	96	Primary Contact Recreation
SUBBASIN: LOWER MARAIS DES CYGNES			
Buck Creek	10290102	44	Primary Contact Recreation
Bull Creek	10290102	26	Secondary Contact Recreation
Davis Creek	10290102	38	Primary Contact Recreation
Dorsey Creek	10290102	22	Primary Contact Recreation
Elm Branch	10290102	48	Primary Contact Recreation
Elm Branch	10290102	53	Primary Contact Recreation
Elm Creek	10290102	40	Primary Contact Recreation
Hushpuckney Creek	10290102	37	Primary Contact Recreation
Jake Branch	10290102	54	Secondary Contact Recreation
Jordan Branch	10290102	36	Primary Contact Recreation
Little Bull Creek	10290102	51	Primary Contact Recreation
Little Sugar Creek	10290102	33	Primary Contact Recreation
Little Sugar Creek, North Fork	10290102	43	Primary Contact Recreation
Martin Creek	10290102	26	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Middle Creek	10290102	13	Primary Contact Recreation
Middle Creek	10290102	30	Primary Contact Recreation
Mound Creek	10290102	35	Primary Contact Recreation
Richland Creek	10290102	41	Primary Contact Recreation
Rock Creek	10290102	27	Primary Contact Recreation
Smith Branch	10290102	47	Primary Contact Recreation
Spring Creek	10290102	50	Primary Contact Recreation
Sugar Creek	10290102	42	Primary Contact Recreation
Turkey Creek	10290102	45	Primary Contact Recreation
Walnut Creek	10290102	14	Primary Contact Recreation
Walnut Creek	10290102	34	Primary Contact Recreation
Walnut Creek	10290102	52	Primary Contact Recreation
Wea Creek, North	10290102	21	Primary Contact Recreation
Wea Creek, South	10290102	18	Primary Contact Recreation
Wea Creek, South	10290102	19	Primary Contact Recreation
Wea Creek, South	10290102	20	Primary Contact Recreation
SUBBASIN: LITTLE OSAGE			
Clever Creek	10290103	7	Primary Contact Recreation
Elk Creek	10290103	11	Primary Contact Recreation
Fish Creek	10290103	8	Primary Contact Recreation
Indian Creek	10290103	12	Primary Contact Recreation
Irish Creek	10290103	9	Primary Contact Recreation
Laberdie Creek, East	10290103	13	Primary Contact Recreation
Limestone Creek	10290103	5	Primary Contact Recreation
Lost Creek	10290103	10	Primary Contact Recreation
Reagan Branch	10290103	6	Primary Contact Recreation
SUBBASIN: MARMATON			
Buck Run	10290104	46	Primary Contact Recreation
Bunion Creek	10290104	39	Primary Contact Recreation
Cedar Creek	10290104	41	Primary Contact Recreation
Drywood Creek, Moores Branch	10290104	17	Primary Contact Recreation
Drywood Creek, West Fork	10290104	19	Primary Contact Recreation
Elm Creek	10290104	15	Secondary Contact Recreation
Hinton Creek	10290104	38	Primary Contact Recreation
Lath Branch	10290104	42	Primary Contact Recreation
Little Mill Creek	10290104	34	Primary Contact Recreation
Mill Creek	10290104	6	Primary Contact Recreation
Owl Creek	10290104	45	Primary Contact Recreation
Paint Creek	10290104	13	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Paint Creek	10290104	14	Primary Contact Recreation
Prong Creek	10290104	44	Secondary Contact Recreation
Robinson Branch	10290104	40	Primary Contact Recreation
Shiloh Creek	10290104	36	Primary Contact Recreation
Sweet Branch	10290104	30	Primary Contact Recreation
Tennyson Creek	10290104	31	Primary Contact Recreation
Turkey Creek	10290104	33	Primary Contact Recreation
Walnut Creek	10290104	32	Primary Contact Recreation
Walnut Creek	10290104	47	Primary Contact Recreation
Wolfpen Creek	10290104	37	Primary Contact Recreation
Wolverine Creek	10290104	35	Primary Contact Recreation
SUBBASIN: SOUTH GRAND			
Harless Creek	10290108	67	Primary Contact Recreation
Poney Creek	10290108	48	Primary Contact Recreation
BASIN: MISSOURI			
SUBBASIN: TARKIO-WOLF			
Cold Ryan Branch	10240005	70	Primary Contact Recreation
Coon Creek	10240005	71	Primary Contact Recreation
Halling Creek	10240005	68	Primary Contact Recreation
Mill Creek	10240005	52	Primary Contact Recreation
Rittenhouse Branch	10240005	69	Primary Contact Recreation
Spring Creek	10240005	65	Primary Contact Recreation
Striker Branch	10240005	72	Primary Contact Recreation
Wolf River, Middle Fork	10240005	67	Primary Contact Recreation
Wolf River, North Fork	10240005	66	Primary Contact Recreation
Wolf River, South Fork	10240005	57	Primary Contact Recreation
Unnamed Stream	10240005	55	Primary Contact Recreation
SUBBASIN: SOUTH FORK BIG NEMAHA			
Burger Creek	10240007	24	Secondary Contact Recreation
Deer Creek	10240007	18	Primary Contact Recreation
Fisher Creek	10240007	28	Primary Contact Recreation
Illinois Creek	10240007	30	Primary Contact Recreation
Rattlesnake Creek	10240007	27	Primary Contact Recreation
Rock Creek	10240007	20	Primary Contact Recreation
Tennessee Creek	10240007	29	Primary Contact Recreation
Turkey Creek	10240007	4	Primary Contact Recreation
Turkey Creek	10240007	5	Primary Contact Recreation
Wildcat Creek	10240007	23	Primary Contact Recreation
Wildcat Creek	10240007	22	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Wolf Pen Creek	10240007	25	Primary Contact Recreation
SUBBASIN: BIG NEMAHA			
Noharts Creek	10240008	42	Primary Contact Recreation
Pedee Creek	10240008	41	Primary Contact Recreation
Pony Creek	10240008	38	Primary Contact Recreation
Roys Creek	10240008	40	Primary Contact Recreation
SUBBASIN: INDEPENDENCE—SUGAR			
Brush Creek	10240011	26	Primary Contact Recreation
Deer Creek	10240011	32	Primary Contact Recreation
Fivemile Creek	10240011	35	Primary Contact Recreation
Independence Creek, North Branch	10240011	29	Primary Contact Recreation
Jordan Creek	10240011	30	Primary Contact Recreation
Owl Creek	10240011	33	Primary Contact Recreation
Rock Creek	10240011	21	Primary Contact Recreation
Salt Creek	10240011	34	Primary Contact Recreation
Smith Creek	10240011	28	Primary Contact Recreation
Three Mile Creek	10240011	36	Primary Contact Recreation
Walnut Creek	10240011	23	Primary Contact Recreation
Walnut Creek	10240011	25	Primary Contact Recreation
White Clay Creek	10240011	31	Primary Contact Recreation
White Clay Creek	10240011	9031	Primary Contact Recreation
Whiskey Creek	10240011	235	Primary Contact Recreation
Whiskey Creek	10240011	9235	Primary Contact Recreation
SUBBASIN: LOWER MISSOURI—CROOKED			
Brush Creek	10300101	54	Primary Contact Recreation
Camp Branch	10300101	56	Primary Contact Recreation
Coffee Creek	10300101	57	Primary Contact Recreation
Dyke Branch	10300101	55	Primary Contact Recreation
Indian Creek	10300101	32	Primary Contact Recreation
Negro Creek	10300101	58	Primary Contact Recreation
Tomahawk Creek	10300101	53	Primary Contact Recreation
BASIN: NEOSHO			
SUBBASIN: NEOSHO HEADWATERS			
Allen Creek	11070201	5	Primary Contact Recreation
Badger Creek	11070201	45	Primary Contact Recreation
Big John Creek	11070201	37	Primary Contact Recreation
Bluff Creek	11070201	8	Primary Contact Recreation
Crooked Creek	11070201	35	Primary Contact Recreation
Dows Creek	11070201	3	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Dows Creek	11070201	4	Primary Contact Recreation
Eagle Creek	11070201	25	Primary Contact Recreation
Eagle Creek, South	11070201	47	Primary Contact Recreation
East Creek	11070201	39	Primary Contact Recreation
Elm Creek	11070201	36	Primary Contact Recreation
Fourmile Creek	11070201	24	Primary Contact Recreation
Fourmile Creek	11070201	48	Primary Contact Recreation
Haun Creek	11070201	29	Primary Contact Recreation
Horse Creek	11070201	33	Primary Contact Recreation
Kahola Creek	11070201	43	Primary Contact Recreation
Lairds Creek	11070201	30	Primary Contact Recreation
Lanos Creek	11070201	21	Primary Contact Recreation
Lebo Creek	11070201	51	Primary Contact Recreation
Munkers Creek, East Branch	11070201	31	Primary Contact Recreation
Munkers Creek, Middle Branch	11070201	32	Primary Contact Recreation
Neosho River, East Fork	11070201	18	Primary Contact Recreation
Neosho River, West Fork	11070201	28	Primary Contact Recreation
Parkers Creek	11070201	27	Primary Contact Recreation
Plum Creek	11070201	50	Primary Contact Recreation
Plumb Creek	11070201	49	Primary Contact Recreation
Rock Creek	11070201	7	Primary Contact Recreation
Rock Creek	11070201	9	Primary Contact Recreation
Rock Creek, East Branch	11070201	34	Primary Contact Recreation
Spring Creek	11070201	40	Primary Contact Recreation
Stillman Creek	11070201	44	Primary Contact Recreation
Taylor Creek	11070201	46	Primary Contact Recreation
Walker Branch	11070201	42	Primary Contact Recreation
Wolf Creek	11070201	41	Primary Contact Recreation
Wrights Creek	11070201	38	Primary Contact Recreation
SUBBASIN: UPPER COTTONWOOD			
Antelope Creek	11070202	19	Primary Contact Recreation
Bills Creek	11070202	30	Primary Contact Recreation
Bruno Creek	11070202	27	Primary Contact Recreation
Catlin Creek	11070202	20	Primary Contact Recreation
Clear Creek	11070202	5	Primary Contact Recreation
Clear Creek, East Branch	11070202	24	Primary Contact Recreation
Coon Creek	11070202	32	Primary Contact Recreation
Cottonwood River, South	11070202	17	Primary Contact Recreation
Cottonwood River, South	11070202	18	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Doyle Creek	11070202	21	Primary Contact Recreation
French Creek	11070202	16	Primary Contact Recreation
Mud Creek	11070202	6	Primary Contact Recreation
Perry Creek	11070202	23	Primary Contact Recreation
Spring Branch	11070202	26	Primary Contact Recreation
Spring Creek	11070202	28	Primary Contact Recreation
Spring Creek	11070202	29	Primary Contact Recreation
Stony Brook	11070202	25	Primary Contact Recreation
Turkey Creek	11070202	31	Primary Contact Recreation
SUBBASIN: LOWER COTTONWOOD			
Beaver Creek	11070203	29	Primary Contact Recreation
Bloody Creek	11070203	40	Primary Contact Recreation
Buck Creek	11070203	39	Primary Contact Recreation
Buckeye Creek	11070203	44	Primary Contact Recreation
Bull Creek	11070203	26	Primary Contact Recreation
Camp Creek	11070203	14	Primary Contact Recreation
Coal Creek	11070203	43	Primary Contact Recreation
Collett Creek	11070203	21	Primary Contact Recreation
Corn Creek	11070203	47	Primary Contact Recreation
Coyne Branch	11070203	33	Primary Contact Recreation
Crocker Creek	11070203	46	Primary Contact Recreation
Dodds Creek	11070203	15	Primary Contact Recreation
Fox Creek	11070203	19	Primary Contact Recreation
French Creek	11070203	32	Primary Contact Recreation
Gannon Creek	11070203	24	Primary Contact Recreation
Gould Creek	11070203	36	Primary Contact Recreation
Holmes Creek	11070203	35	Primary Contact Recreation
Jacob Creek	11070203	28	Primary Contact Recreation
Kirk Creek	11070203	48	Primary Contact Recreation
Little Cedar Creek	11070203	11	Primary Contact Recreation
Little Cedar Creek	11070203	45	Primary Contact Recreation
Middle Creek	11070203	5	Primary Contact Recreation
Mile-and-a-half Creek	11070203	13	Secondary Contact Recreation
Moon Creek	11070203	31	Primary Contact Recreation
Mulvane Creek	11070203	22	Primary Contact Recreation
Peyton Creek	11070203	25	Primary Contact Recreation
Phenis Creek	11070203	30	Primary Contact Recreation
Pickett Creek	11070203	18	Primary Contact Recreation
Prather Creek	11070203	23	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Rock Creek	11070203	37	Primary Contact Recreation
Schaffer Creek	11070203	17	Primary Contact Recreation
School Creek	11070203	16	Primary Contact Recreation
Sharpes Creek	11070203	38	Primary Contact Recreation
Silver Creek	11070203	34	Primary Contact Recreation
Spring Creek	11070203	41	Primary Contact Recreation
Stout Run	11070203	27	Primary Contact Recreation
Stribby Creek	11070203	20	Primary Contact Recreation
SUBBASIN: UPPER NEOSHO			
Badger Creek	11070204	42	Primary Contact Recreation
Big Creek, North	11070204	16	Primary Contact Recreation
Big Creek, South	11070204	17	Primary Contact Recreation
Bloody Run	11070204	25	Primary Contact Recreation
Carlyle Creek	11070204	47	Primary Contact Recreation
Charles Branch	11070204	27	Primary Contact Recreation
Cherry Creek	11070204	20	Primary Contact Recreation
Coal Creek	11070204	4	Primary Contact Recreation
Cottonwood Creek	11070204	48	Primary Contact Recreation
Crooked Creek	11070204	44	Primary Contact Recreation
Draw Creek	11070204	34	Primary Contact Recreation
Goose Creek	11070204	29	Primary Contact Recreation
Long Creek	11070204	12	Primary Contact Recreation
Martin Creek	11070204	49	Primary Contact Recreation
Mud Creek	11070204	26	Primary Contact Recreation
Mud Creek	11070204	31	Primary Contact Recreation
Onion Creek	11070204	24	Primary Contact Recreation
Owl Creek	11070204	19	Primary Contact Recreation
Owl Creek	11070204	21	Primary Contact Recreation
Plum Creek	11070204	22	Primary Contact Recreation
Rock Creek	11070204	7	Primary Contact Recreation
Rock Creek	11070204	23	Primary Contact Recreation
Rock Creek	11070204	15	Primary Contact Recreation
School Creek	11070204	38	Primary Contact Recreation
Scott Creek	11070204	40	Primary Contact Recreation
Slack Creek	11070204	30	Primary Contact Recreation
Spring Creek	11070204	46	Primary Contact Recreation
Sutton Creek	11070204	35	Primary Contact Recreation
Turkey Branch	11070204	28	Primary Contact Recreation
Turkey Creek	11070204	18	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Turkey Creek	11070204	32	Primary Contact Recreation
Twiss Creek	11070204	45	Primary Contact Recreation
Varvel Creek	11070204	43	Primary Contact Recreation
Village Creek	11070204	33	Primary Contact Recreation
Wolf Creek	11070204	37	Primary Contact Recreation
SUBBASIN: MIDDLE NEOSHO			
Bachelor Creek	11070205	40	Primary Contact Recreation
Canville Creek	11070205	16	Primary Contact Recreation
Center Creek	11070205	25	Primary Contact Recreation
Cherry Creek	11070205	4	Primary Contact Recreation
Deer Creek	11070205	27	Primary Contact Recreation
Denny Branch	11070205	31	Primary Contact Recreation
Elk Creek	11070205	19	Primary Contact Recreation
Elm Creek	11070205	43	Primary Contact Recreation
Flat Rock Creek	11070205	12	Primary Contact Recreation
Flat Rock Creek	11070205	14	Primary Contact Recreation
Fourmile Creek	11070205	49	Primary Contact Recreation
Grindstone Creek	11070205	42	Primary Contact Recreation
Hickory Creek	11070205	10	Primary Contact Recreation
Lake Creek	11070205	24	Primary Contact Recreation
Lightning Creek	11070205	6	Primary Contact Recreation
Lightning Creek	11070205	8	Primary Contact Recreation
Limestone Creek	11070205	7	Primary Contact Recreation
Little Cherry Creek	11070205	32	Primary Contact Recreation
Little Elk Creek	11070205	47	Primary Contact Recreation
Little Fly Creek	11070205	26	Secondary Contact Recreation
Little Labette Creek	11070205	23	Primary Contact Recreation
Little Walnut Creek	11070205	46	Primary Contact Recreation
Litup Creek	11070205	36	Primary Contact Recreation
Mulberry Creek	11070205	35	Primary Contact Recreation
Murphy Creek	11070205	41	Primary Contact Recreation
Ogeese Creek	11070205	38	Primary Contact Recreation
Pecan Creek	11070205	45	Primary Contact Recreation
Plum Creek	11070205	34	Primary Contact Recreation
Rock Creek	11070205	48	Primary Contact Recreation
Spring Creek	11070205	30	Primary Contact Recreation
Stink Branch	11070205	37	Primary Contact Recreation
Thunderbolt Creek	11070205	44	Primary Contact Recreation
Tolen Creek	11070205	39	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Town Creek	11070205	28	Primary Contact Recreation
Turkey Creek	11070205	29	Primary Contact Recreation
Walnut Creek	11070205	13	Primary Contact Recreation
Wolf Creek	11070205	33	Primary Contact Recreation
SUBBASIN: LAKE O' THE CHEROKEES			
Fourmile Creek	11070206	18	Primary Contact Recreation
Tar Creek	11070206	19	Primary Contact Recreation
SUBBASIN: SPRING			
Little Shawnee Creek	11070207	22	Primary Contact Recreation
Long Branch	11070207	21	Primary Contact Recreation
Shawnee Creek	11070207	17	Primary Contact Recreation
Taylor Branch	11070207	25	Primary Contact Recreation
Willow Creek	11070207	20	Primary Contact Recreation
BASIN: SMOKY HILL/SALINE			
SUBBASIN: MIDDLE SMOKY HILL			
Ash Creek	10260006	37	Primary Contact Recreation
Big Timber Creek	10260006	24	Primary Contact Recreation
Big Timber Creek	10260006	25	Primary Contact Recreation
Big Timber Creek	10260006	27	Primary Contact Recreation
Blood Creek	10260006	35	Secondary Contact Recreation
Buck Creek	10260006	29	Primary Contact Recreation
Buffalo Creek	10260006	6	Primary Contact Recreation
Clear Creek	10260006	42	Primary Contact Recreation
Coal Creek	10260006	34	Primary Contact Recreation
Cow Creek	10260006	38	Primary Contact Recreation
Eagle Creek	10260006	30	Primary Contact Recreation
Fossil Creek	10260006	13	Primary Contact Recreation
Goose Creek	10260006	39	Primary Contact Recreation
Landon Creek	10260006	31	Primary Contact Recreation
Loss Creek	10260006	44	Primary Contact Recreation
Mud Creek	10260006	47	Primary Contact Recreation
Oxide Creek	10260006	45	Primary Contact Recreation
Sellens Creek	10260006	32	Primary Contact Recreation
Shelter Creek	10260006	43	Primary Contact Recreation
Skunk Creek	10260006	48	Primary Contact Recreation
Spring Creek	10260006	41	Primary Contact Recreation
Timber Creek	10260006	26	Primary Contact Recreation
Turkey Creek	10260006	46	Primary Contact Recreation
Unnamed Stream	10260006	20	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Unnamed Stream	10260006	23	Primary Contact Recreation
Unnamed Stream	10260006	28	Primary Contact Recreation
Wilson Creek	10260006	40	Primary Contact Recreation
Wolf Creek	10260006	36	Primary Contact Recreation
SUBBASIN: LOWER SMOKY HILL			
Basket Creek	10260008	40	Primary Contact Recreation
Battle Creek	10260008	23	Primary Contact Recreation
Carry Creek	10260008	32	Primary Contact Recreation
Carry Creek	10260008	35	Primary Contact Recreation
Chapman Creek, West	10260008	5	Primary Contact Recreation
Dry Creek	10260008	36	Primary Contact Recreation
Dry Creek, East	10260008	43	Primary Contact Recreation
Hobbs Creek	10260008	48	Primary Contact Recreation
Holland Creek	10260008	25	Primary Contact Recreation
Holland Creek, East	10260008	27	Primary Contact Recreation
Holland Creek, West	10260008	26	Primary Contact Recreation
Kentucky Creek	10260008	17	Secondary Contact Recreation
Kentucky Creek, West	10260008	54	Primary Contact Recreation
Lone Tree Creek	10260008	41	Primary Contact Recreation
Lyon Creek, West Branch	10260008	34	Primary Contact Recreation
Mcallister Creek	10260008	49	Primary Contact Recreation
Middle Branch	10260008	58	Primary Contact Recreation
Mud Creek	10260008	8	Primary Contact Recreation
Otter Creek	10260008	42	Primary Contact Recreation
Paint Creek	10260008	52	Secondary Contact Recreation
Pewee Creek	10260008	56	Primary Contact Recreation
Sand Creek	10260008	46	Primary Contact Recreation
Sharps Creek	10260008	16	Secondary Contact Recreation
Spring Creek	10260008	45	Primary Contact Recreation
Stag Creek	10260008	19	Primary Contact Recreation
Turkey Creek	10260008	28	Primary Contact Recreation
Turkey Creek	10260008	30	Primary Contact Recreation
Turkey Creek, East	10260008	50	Primary Contact Recreation
Turkey Creek, West Branch	10260008	29	Primary Contact Recreation
Unnamed Stream	10260008	K3	Primary Contact Recreation
Unnamed Stream	10260008	K4	Primary Contact Recreation
Unnamed Stream	10260008	K24	Primary Contact Recreation
Wiley Creek	10260008	47	Primary Contact Recreation
SUBBASIN: UPPER SALINE			

Stream segment name	HUC8	Segment #	Designated use
Cedar Creek	10260009	30	Secondary Contact Recreation
Chalk Creek	10260009	26	Primary Contact Recreation
Coyote Creek	10260009	23	Primary Contact Recreation
Eagle Creek	10260009	6	Primary Contact Recreation
Happy Creek	10260009	25	Primary Contact Recreation
Paradise Creek	10260009	5	Primary Contact Recreation
Salt Creek	10260009	20	Primary Contact Recreation
Spring Creek, East	10260009	10	Primary Contact Recreation
Sweetwater Creek	10260009	29	Primary Contact Recreation
Trego Creek	10260009	19	Primary Contact Recreation
Unnamed Stream	10260009	13	Primary Contact Recreation
Wild Horse Creek	10260009	27	Primary Contact Recreation
SUBBASIN: LOWER SALINE			
Bacon Creek	10260010	7	Primary Contact Recreation
Blue Stem Creek	10260010	33	Primary Contact Recreation
Coon Creek	10260010	31	Primary Contact Recreation
Dry Creek	10260010	29	Secondary Contact Recreation
Eff Creek	10260010	23	Primary Contact Recreation
Elkhorn Creek	10260010	17	Primary Contact Recreation
Elkhorn Creek, West	10260010	38	Primary Contact Recreation
Fourmile Creek	10260010	30	Primary Contact Recreation
Lost Creek	10260010	34	Secondary Contact Recreation
Owl Creek	10260010	18	Primary Contact Recreation
Owl Creek	10260010	39	Primary Contact Recreation
Ralston Creek	10260010	28	Primary Contact Recreation
Shaw Creek	10260010	41	Primary Contact Recreation
Spillman Creek	10260010	6	Primary Contact Recreation
Spillman Creek, North Branch	10260010	8	Primary Contact Recreation
Spring Creek	10260010	16	Primary Contact Recreation
Spring Creek	10260010	19	Primary Contact Recreation
Spring Creek	10260010	20	Primary Contact Recreation
Spring Creek	10260010	24	Primary Contact Recreation
Spring Creek	10260010	26	Primary Contact Recreation
Spring Creek	10260010	27	Primary Contact Recreation
Table Rock Creek	10260010	40	Primary Contact Recreation
Trail Creek	10260010	32	Secondary Contact Recreation
Twelvemile Creek	10260010	36	Primary Contact Recreation
Twin Creek, West	10260010	37	Secondary Contact Recreation
West Spring Creek	10260010	25	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Wolf Creek	10260010	10	Primary Contact Recreation
Wolf Creek, East Fork	10260010	11	Primary Contact Recreation
Wolf Creek, West Fork	10260010	12	Primary Contact Recreation
Yauger Creek	10260010	35	Primary Contact Recreation

BASIN: SOLOMON

SUBBASIN: UPPER NORTH FORK SOLOMON

Ash Creek	10260011	24	Primary Contact Recreation
Beaver Creek	10260011	23	Primary Contact Recreation
Big Timber Creek	10260011	8	Primary Contact Recreation
Bow Creek	10260011	15	Primary Contact Recreation
Cactus Creek	10260011	28	Primary Contact Recreation
Crooked Creek	10260011	6	Primary Contact Recreation
Elk Creek	10260011	12	Primary Contact Recreation
Elk Creek, East	10260011	25	Primary Contact Recreation
Game Creek	10260011	10	Primary Contact Recreation
Game Creek	10260011	27	Primary Contact Recreation
Lost Creek	10260011	20	Primary Contact Recreation
Sand Creek	10260011	26	Primary Contact Recreation
Scull Creek	10260011	21	Primary Contact Recreation
Spring Creek	10260011	19	Primary Contact Recreation
Wolf Creek	10260011	22	Primary Contact Recreation

SUBBASIN: LOWER NORTH FORK SOLOMON

Beaver Creek	10260012	10	Primary Contact Recreation
Beaver Creek, East Branch	10260012	11	Primary Contact Recreation
Beaver Creek, Middle	10260012	12	Primary Contact Recreation
Beaver Creek, Middle	10260012	13	Primary Contact Recreation
Beaver Creek, West	10260012	14	Secondary Contact Recreation
Big Creek	10260012	26	Primary Contact Recreation
Boughton Creek	10260012	34	Primary Contact Recreation
Buck Creek	10260012	43	Secondary Contact Recreation
Cedar Creek	10260012	16	Primary Contact Recreation
Cedar Creek	10260012	18	Primary Contact Recreation
Cedar Creek, East	10260012	17	Primary Contact Recreation
Cedar Creek, East Middle	10260012	37	Primary Contact Recreation
Cedar Creek, Middle	10260012	19	Secondary Contact Recreation
Deer Creek	10260012	23	Primary Contact Recreation
Deer Creek	10260012	25	Primary Contact Recreation
Deer Creek	10260012	27	Primary Contact Recreation
Deer Creek	10260012	29	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Deer Creek	10260012	31	Primary Contact Recreation
Dry Creek	10260012	42	Primary Contact Recreation
Glen Rock Creek	10260012	41	Primary Contact Recreation
Lawrence Creek	10260012	44	Primary Contact Recreation
Lindley Creek	10260012	45	Primary Contact Recreation
Little Oak Creek	10260012	3	Primary Contact Recreation
Medicine Creek	10260012	33	Primary Contact Recreation
Oak Creek	10260012	2	Primary Contact Recreation
Oak Creek	10260012	4	Primary Contact Recreation
Oak Creek, East	10260012	40	Primary Contact Recreation
Oak Creek, West	10260012	39	Secondary Contact Recreation
Plotner Creek	10260012	30	Primary Contact Recreation
Plum Creek	10260012	20	Primary Contact Recreation
Spring Creek	10260012	8	Secondary Contact Recreation
Spring Creek	10260012	28	Secondary Contact Recreation
Starvation Creek	10260012	38	Primary Contact Recreation
Turner Creek	10260012	24	Primary Contact Recreation
SUBBASIN: UPPER SOUTH FORK SOLOMON			
Spring Creek	10260013	5	Primary Contact Recreation
SUBBASIN: LOWER SOUTH FORK SOLOMON			
Ash Creek	10260014	22	Primary Contact Recreation
Boxelder Creek	10260014	14	Primary Contact Recreation
Carr Creek	10260014	21	Primary Contact Recreation
Covert Creek	10260014	19	Primary Contact Recreation
Crooked Creek	10260014	27	Primary Contact Recreation
Dibble Creek	10260014	23	Primary Contact Recreation
Elm Creek	10260014	15	Primary Contact Recreation
Jim Creek	10260014	25	Primary Contact Recreation
Kill Creek	10260014	18	Primary Contact Recreation
Kill Creek, East	10260014	28	Primary Contact Recreation
Lost Creek	10260014	13	Primary Contact Recreation
Lucky Creek	10260014	26	Primary Contact Recreation
Medicine Creek	10260014	16	Primary Contact Recreation
Medicine Creek	10260014	17	Primary Contact Recreation
Robbers Roost Creek	10260014	24	Primary Contact Recreation
Twin Creek	10260014	20	Primary Contact Recreation
Twin Creek, East	10260014	29	Primary Contact Recreation
SUBBASIN: SOLOMON RIVER			
Cow Creek	10260015	28	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Fifth Creek	10260015	45	Secondary Contact Recreation
Granite Creek	10260015	24	Secondary Contact Recreation
Leban Creek	10260015	41	Secondary Contact Recreation
Mill Creek	10260015	38	Secondary Contact Recreation
Mulberry Creek	10260015	36	Secondary Contact Recreation
Pipe Creek	10260015	9	Primary Contact Recreation
Walnut Creek	10260015	26	Secondary Contact Recreation
BASIN: UPPER ARKANSAS			
SUBBASIN: BUCKNER			
Buckner Creek, South Fork	11030006	6	Primary Contact Recreation
Duck Creek	11030006	8	Secondary Contact Recreation
Elm Creek	11030006	5	Primary Contact Recreation
Saw Log Creek	11030006	3	Primary Contact Recreation
Saw Log Creek	11030006	4	Secondary Contact Recreation
SUBBASIN: LOWER WALNUT CREEK			
Alexander Dry Creek	11030008	7	Secondary Contact Recreation
Bazine Creek	11030008	9	Secondary Contact Recreation
Boot Creek	11030008	15	Secondary Contact Recreation
Dry Creek	11030008	14	Secondary Contact Recreation
Dry Walnut Creek	11030008	13	Secondary Contact Recreation
Otter Creek	11030008	12	Primary Contact Recreation
Sand Creek	11030008	3	Secondary Contact Recreation
Sandy Creek	11030008	11	Secondary Contact Recreation
Walnut Creek	11030008	1	Primary Contact Recreation
Walnut Creek	11030008	2	Primary Contact Recreation
Walnut Creek	11030008	4	Primary Contact Recreation
BASIN: UPPER REPUBLICAN			
SUBBASIN: SOUTH FORK REPUBLICAN			
Big Timber Creek	10250003	61	Secondary Contact Recreation
SUBBASIN: BEAVER			
Beaver Creek	10250014	2	Secondary Contact Recreation
BASIN: VERDIGRIS			
SUBBASIN: UPPER VERDIGRIS			
Bachelor Creek	11070101	21	Primary Contact Recreation
Bernard Creek	11070101	24	Secondary Contact Recreation
Big Cedar Creek	11070101	39	Primary Contact Recreation
Brazil Creek	11070101	31	Primary Contact Recreation
Buffalo Creek	11070101	2	Primary Contact Recreation
Buffalo Creek, West	11070101	34	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Cedar Creek	11070101	32	Primary Contact Recreation
Chetopa Creek	11070101	22	Primary Contact Recreation
Crooked Creek	11070101	38	Primary Contact Recreation
Dry Creek	11070101	27	Primary Contact Recreation
Elder Branch	11070101	37	Primary Contact Recreation
Fancy Creek	11070101	28	Primary Contact Recreation
Greenhall Creek	11070101	26	Primary Contact Recreation
Holderman Creek	11070101	47	Primary Contact Recreation
Homer Creek	11070101	20	Primary Contact Recreation
Kelly Branch	11070101	42	Primary Contact Recreation
Kuntz Branch	11070101	29	Primary Contact Recreation
Little Sandy Creek	11070101	33	Primary Contact Recreation
Long Creek	11070101	45	Primary Contact Recreation
Miller Creek	11070101	30	Primary Contact Recreation
Moon Branch	11070101	43	Primary Contact Recreation
Onion Creek	11070101	23	Primary Contact Recreation
Rock Creek	11070101	14	Primary Contact Recreation
Ross Branch	11070101	35	Primary Contact Recreation
Sandy Creek	11070101	4	Primary Contact Recreation
Shaw Creek	11070101	40	Primary Contact Recreation
Slate Creek	11070101	25	Primary Contact Recreation
Snake Creek	11070101	36	Primary Contact Recreation
Tate Branch Creek	11070101	44	Primary Contact Recreation
Van Horn Creek	11070101	46	Primary Contact Recreation
Verdigris River, Bernard Branch	11070101	16	Primary Contact Recreation
Verdigris River, North Branch	11070101	13	Primary Contact Recreation
Verdigris River, North Branch	11070101	15	Primary Contact Recreation
Walnut Creek	11070101	19	Primary Contact Recreation
West Creek	11070101	17	Primary Contact Recreation
Wolf Creek	11070101	41	Primary Contact Recreation
SUBBASIN: FALL			
Battle Creek	11070102	18	Primary Contact Recreation
Burnt Creek	11070102	24	Primary Contact Recreation
Clear Creek	11070102	37	Primary Contact Recreation
Coon Creek	11070102	25	Primary Contact Recreation
Coon Creek	11070102	36	Primary Contact Recreation
Crain Creek	11070102	32	Primary Contact Recreation
Honey Creek	11070102	26	Primary Contact Recreation
Indian Creek	11070102	15	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Ivanpah Creek	11070102	19	Primary Contact Recreation
Kitty Creek	11070102	27	Primary Contact Recreation
Little Indian Creek	11070102	34	Primary Contact Recreation
Little Salt Creek	11070102	35	Primary Contact Recreation
Oleson Creek	11070102	21	Primary Contact Recreation
Otis Creek	11070102	20	Primary Contact Recreation
Plum Creek	11070102	30	Primary Contact Recreation
Rainbow Creek, East	11070102	17	Primary Contact Recreation
Salt Creek	11070102	14	Primary Contact Recreation
Salt Creek	11070102	38	Primary Contact Recreation
Silver Creek	11070102	33	Primary Contact Recreation
Snake Creek	11070102	31	Primary Contact Recreation
Spring Creek	11070102	12	Primary Contact Recreation
Swing Creek	11070102	989	Primary Contact Recreation
Tadpole Creek	11070102	29	Primary Contact Recreation
Watson Branch	11070102	23	Primary Contact Recreation
SUBBASIN: MIDDLE VERDIGRIS			
Big Creek	11070103	21	Primary Contact Recreation
Biscuit Creek	11070103	53	Primary Contact Recreation
Bluff Run	11070103	54	Primary Contact Recreation
Choteau Creek	11070103	63	Primary Contact Recreation
Claymore Creek	11070103	50	Primary Contact Recreation
Deadman Creek	11070103	57	Primary Contact Recreation
Deer Creek	11070103	51	Primary Contact Recreation
Drum Creek	11070103	34	Primary Contact Recreation
Dry Creek	11070103	37	Primary Contact Recreation
Fawn Creek	11070103	56	Primary Contact Recreation
Mud Creek	11070103	59	Primary Contact Recreation
Onion Creek	11070103	39	Primary Contact Recreation
Potato Creek	11070103	31	Primary Contact Recreation
Prior Creek	11070103	62	Primary Contact Recreation
Pumpkin Creek	11070103	28	Primary Contact Recreation
Richland Creek	11070103	49	Primary Contact Recreation
Rock Creek	11070103	58	Primary Contact Recreation
Rock Creek	11070103	61	Primary Contact Recreation
Snow Creek	11070103	25	Primary Contact Recreation
Spring Creek	11070103	55	Primary Contact Recreation
Sycamore Creek	11070103	52	Primary Contact Recreation
Wildcat Creek	11070103	60	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
SUBBASIN: ELK			
Bachelor Creek	11070104	25	Primary Contact Recreation
Bloody Run	11070104	26	Primary Contact Recreation
Bull Creek	11070104	33	Primary Contact Recreation
Card Creek	11070104	19	Primary Contact Recreation
Chetopa Creek	11070104	18	Primary Contact Recreation
Clear Creek	11070104	30	Primary Contact Recreation
Clear Creek	11070104	32	Primary Contact Recreation
Coffey Branch	11070104	20	Primary Contact Recreation
Duck Creek	11070104	3	Primary Contact Recreation
Elk River, Mound Branch	11070104	15	Primary Contact Recreation
Elk River, South Branch	11070104	38	Primary Contact Recreation
Elk River, Rowe Branch	11070104	39	Primary Contact Recreation
Elm Branch	11070104	23	Primary Contact Recreation
Hickory Creek	11070104	28	Primary Contact Recreation
Hitchen Creek	11070104	7	Primary Contact Recreation
Hitchen Creek, East	11070104	35	Primary Contact Recreation
Little Duck Creek	11070104	24	Primary Contact Recreation
Little Hitchen Creek	11070104	37	Primary Contact Recreation
Painterhood Creek	11070104	5	Primary Contact Recreation
Painterhood Creek, East	11070104	36	Primary Contact Recreation
Pan Creek	11070104	27	Primary Contact Recreation
Pawpaw Creek	11070104	11	Primary Contact Recreation
Racket Creek	11070104	21	Primary Contact Recreation
Rock Creek	11070104	13	Primary Contact Recreation
Salt Creek	11070104	17	Primary Contact Recreation
Salt Creek, South	11070104	29	Primary Contact Recreation
Skull Creek	11070104	31	Primary Contact Recreation
Snake Creek	11070104	34	Primary Contact Recreation
Sycamore Creek	11070104	22	Primary Contact Recreation
Wildcat Creek	11070104	16	Primary Contact Recreation
SUBBASIN: CANEY			
Bachelor Creek	11070106	47	Primary Contact Recreation
Bee Creek	11070106	9	Primary Contact Recreation
California Creek	11070106	48	Primary Contact Recreation
Caney Creek	11070106	12	Primary Contact Recreation
Caney River, East Fork	11070106	52	Primary Contact Recreation
Caney Creek, North	11070106	11	Primary Contact Recreation
Cedar Creek	11070106	30	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Cedar Creek	11070106	32	Primary Contact Recreation
Cheyenne Creek	11070106	40	Primary Contact Recreation
Coon Creek	11070106	36	Primary Contact Recreation
Corum Creek	11070106	51	Primary Contact Recreation
Cotton Creek	11070106	38	Primary Contact Recreation
Cotton Creek, North Fork	11070106	37	Primary Contact Recreation
Dry Creek	11070106	29	Primary Contact Recreation
Fly Creek	11070106	46	Primary Contact Recreation
Illinois Creek	11070106	39	Primary Contact Recreation
Jim Creek	11070106	49	Primary Contact Recreation
Lake Creek	11070106	34	Primary Contact Recreation
Otter Creek	11070106	33	Primary Contact Recreation
Pool Creek	11070106	43	Primary Contact Recreation
Possum Trot Creek	11070106	74	Primary Contact Recreation
Rock Creek	11070106	28	Primary Contact Recreation
Spring Creek	11070106	44	Primary Contact Recreation
Spring Creek	11070106	53	Primary Contact Recreation
Squaw Creek	11070106	42	Primary Contact Recreation
Sycamore Creek	11070106	31	Primary Contact Recreation
Turkey Creek	11070106	45	Primary Contact Recreation
Union Creek	11070106	41	Primary Contact Recreation
Wolf Creek	11070106	35	Primary Contact Recreation
Wolf Creek	11070106	50	Primary Contact Recreation

BASIN: WALNUT

SUBBASIN: UPPER WALNUT RIVER

Badger Creek	11030017	36	Primary Contact Recreation
Bemis Creek	11030017	8	Primary Contact Recreation
Cole Creek	11030017	15	Primary Contact Recreation
Constant Creek	11030017	41	Primary Contact Recreation
Dry Creek	11030017	27	Primary Contact Recreation
Dry Creek	11030017	32	Primary Contact Recreation
Durechen Creek	11030017	12	Primary Contact Recreation
Elm Creek	11030017	43	Primary Contact Recreation
Fourmile Creek	11030017	20	Primary Contact Recreation
Gilmore Branch	11030017	39	Primary Contact Recreation
Gypsum Creek	11030017	30	Primary Contact Recreation
Henry Creek	11030017	33	Primary Contact Recreation
Lower Branch	11030017	42	Primary Contact Recreation
Prairie Creek	11030017	35	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
Rock Creek	11030017	37	Primary Contact Recreation
Sand Creek	11030017	29	Primary Contact Recreation
Satchel Creek	11030017	10	Primary Contact Recreation
School Branch	11030017	45	Primary Contact Recreation
Sutton Creek	11030017	40	Primary Contact Recreation
Walnut Creek	11030017	44	Primary Contact Recreation
Whitewater Creek	11030017	34	Primary Contact Recreation
Whitewater Creek, East Branch	11030017	31	Primary Contact Recreation
Whitewater River, East Branch	11030017	22	Primary Contact Recreation
Whitewater River, West Branch	11030017	24	Primary Contact Recreation
Whitewater River, West Branch	11030017	25	Primary Contact Recreation
Wildcat Creek	11030017	26	Primary Contact Recreation
Wildcat Creek, West	11030017	28	Primary Contact Recreation
SUBBASIN: LOWER WALNUT RIVER			
Black Crook Creek	11030018	18	Primary Contact Recreation
Cedar Creek	11030018	19	Secondary Contact Recreation
Chigger Creek	11030018	21	Primary Contact Recreation
Crooked Creek	11030018	31	Primary Contact Recreation
Durham Creek	11030018	23	Primary Contact Recreation
Dutch Creek	11030018	2	Primary Contact Recreation
Dutch Creek	11030018	4	Primary Contact Recreation
Eightmile Creek	11030018	30	Primary Contact Recreation
Foos Creek	11030018	26	Primary Contact Recreation
Hickory Creek	11030018	12	Primary Contact Recreation
Honey Creek	11030018	33	Primary Contact Recreation
Little Dutch Creek	11030018	27	Primary Contact Recreation
Lower Dutch Creek	11030018	20	Primary Contact Recreation
Plum Creek	11030018	36	Primary Contact Recreation
Polecat Creek	11030018	17	Primary Contact Recreation
Posey Creek	11030018	37	Primary Contact Recreation
Richland Creek	11030018	25	Primary Contact Recreation
Rock Creek, North Branch	11030018	35	Primary Contact Recreation
Sanford Creek	11030018	29	Primary Contact Recreation
Spring Branch	11030018	32	Primary Contact Recreation
Stalter Branch	11030018	24	Primary Contact Recreation
Stewart Creek	11030018	28	Primary Contact Recreation
Swisher Branch	11030018	22	Primary Contact Recreation

Stream segment name	HUC8	Segment #	Designated use
TOTAL = 1186			

Lake name	County	Designated use
BASIN: CIMARRON		
SUBBASIN: UPPER CIMARRON (HUC 11040002)		
Moss Lake East	MORTON	Primary Contact Recreation
Moss Lake West	MORTON	Primary Contact Recreation
SUBBASIN: NORTH FORK CIMARRON (HUC 11040006)		
Russell Lake	STEVENS	Primary Contact Recreation
SUBBASIN: UPPER CIMARRON-BLUFF (HUC 11040008)		
Clark State Fishing Lake	CLARK	Primary Contact Recreation
Saint Jacob's Well	CLARK	Primary Contact Recreation
BASIN: KANSAS/LOWER REPUBLICAN		
SUBBASIN: MIDDLE REPUBLICAN (HUC 10250016)		
Lake Jewell	JEWELL	Primary Contact Recreation
SUBBASIN: LOWER REPUBLICAN (HUC 10250017)		
Belleville City Lake	REPUBLIC	Primary Contact Recreation
Wakefield Lake	CLAY	Primary Contact Recreation
SUBBASIN: MIDDLE KANSAS (HUC 10270102)		
Alma City Reservoir	WABAUNSEE	Primary Contact Recreation
Cedar Crest Pond	SHAWNEE	Primary Contact Recreation
Central Park Lake	SHAWNEE	Primary Contact Recreation
Gage Park Lake	SHAWNEE	Primary Contact Recreation
Jeffrey Energy Center Lakes	POTTAWATOMIE	Primary Contact Recreation
SUBBASIN: DELAWARE (HUC 10270103)		
Atchison County Park Lake	ATCHISON	Primary Contact Recreation
Little Lake	BROWN	Primary Contact Recreation
SUBBASIN: LOWER KANSAS (HUC 10270104)		
Douglas County State Lake	DOUGLAS	Primary Contact Recreation
Lenexa Lake	JOHNSON	Primary Contact Recreation
Mahaffie Farmstead Pond	JOHNSON	Primary Contact Recreation
Pierson Park Lake	WYANDOTTE	Primary Contact Recreation
Waterworks Lakes	JOHNSON	Primary Contact Recreation
SUBBASIN: LOWER BIG BLUE (HUC 10270205)		
Lake Idlewild	MARSHALL	Primary Contact Recreation

Lake name	County	Designated use
SUBBASIN: LOWER LITTLE BLUE (HUC 10270207)		
Washington County State Fishing Lake	WASHINGTON	Primary Contact Recreation
BASIN: LOWER ARKANSAS		
SUBBASIN: RATTLESNAKE (HUC 11030009)		
Kiowa County State Fishing Lake	KIOWA	Primary Contact Recreation
SUBBASIN: COW (HUC 11030011)		
Barton Lake	BARTON	Primary Contact Recreation
Sterling City Lake	RICE	Primary Contact Recreation
SUBBASIN: LITTLE ARKANSAS (HUC 11030012)		
Dillon Park Lakes #1	RENO	Primary Contact Recreation
Dillon Park Lake #2	RENO	Primary Contact Recreation
Newton City Park Lake	HARVEY	Primary Contact Recreation
SUBBASIN: MIDDLE ARKANSAS-SLATE (HUC 11030013)		
Belaire Lake	SEDGWICK	Primary Contact Recreation
Buffalo Park Lake	SEDGWICK	Primary Contact Recreation
Emery Park	SEDGWICK	Primary Contact Recreation
Harrison Park Lake	SEDGWICK	Primary Contact Recreation
Riggs Park Lake	SEDGWICK	Primary Contact Recreation
SUBBASIN: SOUTH FORK NINNESCAH (HUC 11030015)		
Lemon Park Lake	PRATT	Primary Contact Recreation
SUBBASIN: MEDICINE LODGE (HUC 11060003)		
Barber County State Fishing Lake	BARBER	Primary Contact Recreation
SUBBASIN: LOWER SALT FORK ARKANSAS (HUC 11060004)		
Hargis Lake	BARBER	Primary Contact Recreation
BASIN: MARAIS DES CYGNES		
SUBBASIN: UPPER MARAIS DES CYGNES (HUC 10290101)		
Allen City Lake	LYON	Primary Contact Recreation
Cedar Creek Lake	ANDERSON	Primary Contact Recreation
Crystal Lake	ANDERSON	Primary Contact Recreation
Lyon County State Fishing Lake	LYON	Primary Contact Recreation
Osage City Reservoir	OSAGE	Primary Contact Recreation
Waterworks Impoundment	ANDERSON	Primary Contact Recreation
SUBBASIN: LOWER MARAIS DES CYGNES (HUC 10290102)		
Edgerton City Lake	JOHNSON	Primary Contact Recreation
Edgerton South Lake	JOHNSON	Primary Contact Recreation
Lake LaCygne	LINN	Primary Contact Recreation
Louisburg State Fishing Lake	MIAMI	Primary Contact Recreation
Miami County State Fishing Lake	MIAMI	Primary Contact Recreation

Lake name	County	Designated use
Paola City Lake	MIAMI	Primary Contact Recreation
Pleasanton Lake #1	LINN	Primary Contact Recreation
Pleasanton Lake #2	LINN	Primary Contact Recreation
Spring Hill City Lake	JOHNSON	Primary Contact Recreation
SUBBASIN: MARMATON (HUC 10290104)		
Gunn Park Lake, East	BOURBON	Primary Contact Recreation
Gunn Park Lake, West	BOURBON	Primary Contact Recreation
Rock Creek Lake	BOURBON	Primary Contact Recreation
BASIN: MISSOURI		
SUBBASIN: SOUTH FORK BIG NEMAHA (HUC 10240007)		
Pony Creek Lake	NEMAHA	Primary Contact Recreation
Sabetha City Lake	NEMAHA	Primary Contact Recreation
SUBBASIN: INDEPENDENCE-SUGAR (HUC 10240011)		
Atchison City Lakes	ATCHISON	Primary Contact Recreation
Big Eleven Lake	WYANDOTTE	Primary Contact Recreation
Doniphan Fair Association Lake	DONIPHAN	Primary Contact Recreation
Jerrys Lake	LEAVENWORTH	Primary Contact Recreation
Lansing City Lake	LEAVENWORTH	Primary Contact Recreation
South Park Lake	LEAVENWORTH	Primary Contact Recreation
SUBBASIN: LOWER MISSOURI-CROOKED (HUC 10300101)		
Prairie View Park	JOHNSON	Primary Contact Recreation
South Park Lake	JOHNSON	Primary Contact Recreation
Stanley Rural Water District Lake #2	JOHNSON	Primary Contact Recreation
Stohl Park Lake	JOHNSON	Primary Contact Recreation
BASIN: NEOSHO		
SUBBASIN: LOWER COTTONWOOD (HUC 11070203)		
Peter Pan Pond	LYON	Primary Contact Recreation
SUBBASIN: UPPER NEOSHO (HUC 11070204)		
Chanute City (Santa Fe) Lake	NEOSHO	Primary Contact Recreation
Leonard's Lake	WOODSON	Primary Contact Recreation
SUBBASIN: MIDDLE NEOSHO (HUC 11070205)		
Altamont City Lake #1	LABETTE	Primary Contact Recreation
Bartlett City Lake	LABETTE	Primary Contact Recreation
Harmon Wildlife Area Lakes	LABETTE	Primary Contact Recreation
Mined Land Wildlife Area Lakes	CHEROKEE	Primary Contact Recreation
Timber Lake	NEOSHO	Primary Contact Recreation
SUBBASIN: SPRING (HUC 11070207)		
Empire Lake	CHEROKEE	Primary Contact Recreation
Frontenac City Park	CRAWFORD	Primary Contact Recreation

Lake name	County	Designated use
Mined Land Wildlife Area Lakes	CRAWFORD	Primary Contact Recreation
Pittsburg College Lake	CRAWFORD	Primary Contact Recreation
Playters Lake	CRAWFORD	Primary Contact Recreation
BASIN: SMOKY HILL/SALINE		
SUBBASIN: LOWER SMOKY HILL (HUC 10260008)		
Herington City Park Lake	DICKINSON	Primary Contact Recreation
Herington Reservoir	DICKINSON	Primary Contact Recreation
BASIN: SOLOMON		
SUBBASIN: LOWER NORTH FORK SOLOMON (HUC 10260012)		
Francis Wachs Wildlife Area Lakes	SMITH	Primary Contact Recreation
SUBBASIN: SOLOMON RIVER (HUC 10260015)		
Jewell County State Fishing Lake	JEWELL	Primary Contact Recreation
Ottawa County State Fishing Lake	OTTAWA	Primary Contact Recreation
BASIN: UPPER ARKANSAS		
SUBBASIN: MIDDLE ARKANSAS-LAKE MCKINNEY (HUC 11030001)		
Lake McKinney	KEARNY	Primary Contact Recreation
SUBBASIN: ARKANSAS-DODGE CITY (HUC 11030003)		
Lake Charles	FORD	Primary Contact Recreation
SUBBASIN: PAWNEE (HUC 11030005)		
Concannon State Fishing Lake	FINNEY	Primary Contact Recreation
Finney County Game Refuge Lakes	FINNEY	Primary Contact Recreation
SUBBASIN: BUCKNER (HUC 11030006)		
Ford County Lake	FORD	Primary Contact Recreation
Hain State Fishing Lake	FORD	Primary Contact Recreation
SUBBASIN: UPPER WALNUT CREEK (HUC 11030007)		
Goodman State Fishing Lake	NESS	Primary Contact Recreation
SUBBASIN: LOWER WALNUT CREEK (HUC 11030008)		
Memorial Park Lake	BARTON	Primary Contact Recreation
Stone Lake	BARTON	Primary Contact Recreation
BASIN: VERDIGRIS		
SUBBASIN: UPPER VERDIGRIS (HUC 11070101)		
Quarry Lake	WILSON	Primary Contact Recreation
Thayer New City Lake	NEOSHO	Primary Contact Recreation
SUBBASIN: MIDDLE VERDIGRIS (HUC 11070103)		
La Claire Lake	MONTGOMERY	Primary Contact Recreation
Pfister Park Lakes	MONTGOMERY	Primary Contact Recreation
SUBBASIN: CANEY (HUC 11070106)		
Caney City Lake	CHAUTAUQUA	Primary Contact Recreation

Lake name	County	Designated use
BASIN: WALNUT		
SUBBASIN: LOWER WALNUT RIVER (HUC 11030018)		
Butler County State Fishing Lake	BUTLER	Primary Contact Recreation
Winfield Park Lagoon	COWLEY	Primary Contact Recreation
TOTAL = 100		

- (c) **Water quality standard variances.** The Regional Administrator, EPA Region 7, is authorized to grant variances from the water quality standards in paragraphs (a) and (b) of this section where the requirements of § 131.14 are met.

[68 FR 40442, July 7, 2003, as amended at 80 FR 51050, Aug. 21, 2015]

§ 131.35 Colville Confederated Tribes Indian Reservation.

The water quality standards applicable to the waters within the Colville Indian Reservation, located in the State of Washington.

(a) **Background.**

- (1) It is the purpose of these Federal water quality standards to prescribe minimum water quality requirements for the surface waters located within the exterior boundaries of the Colville Indian Reservation to ensure compliance with section 303(c) of the Clean Water Act.
- (2) The Colville Confederated Tribes have a primary interest in the protection, control, conservation, and utilization of the water resources of the Colville Indian Reservation. Water quality standards have been enacted into tribal law by the Colville Business Council of the Confederated Tribes of the Colville Reservation, as the Colville Water Quality Standards Act, CTC Title 33 (Resolution No. 1984-526 (August 6, 1984) as amended by Resolution No. 1985-20 (January 18, 1985)).

- (b) **Territory covered.** The provisions of these water quality standards shall apply to all surface waters within the exterior boundaries of the Colville Indian Reservation.

(c) **Applicability, Administration and Amendment.**

- (1) The water quality standards in this section shall be used by the Regional Administrator for establishing any water quality based National Pollutant Discharge Elimination System Permit (NPDES) for point sources on the Colville Confederated Tribes Reservation.
- (2) In conjunction with the issuance of section 402 or section 404 permits, the Regional Administrator may designate mixing zones in the waters of the United States on the reservation on a case-by-case basis. The size of such mixing zones and the in-zone water quality in such mixing zones shall be consistent with the applicable procedures and guidelines in EPA's Water Quality Standards Handbook and the Technical Support Document for Water Quality Based Toxics Control.
- (3) Amendments to the section at the request of the Tribe shall proceed in the following manner.

- (i) The requested amendment shall first be duly approved by the Confederated Tribes of the Colville Reservation (and so certified by the Tribes Legal Counsel) and submitted to the Regional Administrator.
 - (ii) The requested amendment shall be reviewed by EPA (and by the State of Washington, if the action would affect a boundary water).
 - (iii) If deemed in compliance with the Clean Water Act, EPA will propose and promulgate an appropriate change to this section.
- (4) Amendment of this section at EPA's initiative will follow consultation with the Tribe and other appropriate entities. Such amendments will then follow normal EPA rulemaking procedures.
 - (5) All other applicable provisions of this part 131 shall apply on the Colville Confederated Tribes Reservation. Special attention should be paid to §§ 131.6, 131.10, 131.11 and 131.20 for any amendment to these standards to be initiated by the Tribe.
 - (6) All numeric criteria contained in this section apply at all in-stream flow rates greater than or equal to the flow rate calculated as the minimum 7-consecutive day average flow with a recurrence frequency of once in ten years (7Q10); narrative criteria (§ 131.35(e)(3)) apply regardless of flow. The 7Q10 low flow shall be calculated using methods recommended by the U.S. Geological Survey.

(d) **Definitions.**

- (1) **Acute toxicity** means a deleterious response (e.g., mortality, disorientation, immobilization) to a stimulus observed in 96 hours or less.
- (2) **Background conditions** means the biological, chemical, and physical conditions of a water body, upstream from the point or non-point source discharge under consideration. Background sampling location in an enforcement action will be upstream from the point of discharge, but not upstream from other inflows. If several discharges to any water body exist, and an enforcement action is being taken for possible violations to the standards, background sampling will be undertaken immediately upstream from each discharge.
- (3) **Ceremonial and Religious water use** means activities involving traditional Native American spiritual practices which involve, among other things, primary (direct) contact with water.
- (4) **Chronic toxicity** means the lowest concentration of a constituent causing observable effects (*i.e.*, considering lethality, growth, reduced reproduction, etc.) over a relatively long period of time, usually a 28-day test period for small fish test species.
- (5) **Council or Tribal Council** means the Colville Business Council of the Colville Confederated Tribes.
- (6) **Geometric mean** means the *n*th root of a product of *n* factors.
- (7) **Mean retention time** means the time obtained by dividing a reservoir's mean annual minimum total storage by the non-zero 30-day, ten-year low-flow from the reservoir.
- (8) **Mixing zone or dilution zone** means a limited area or volume of water where initial dilution of a discharge takes place; and where numeric water quality criteria can be exceeded but acutely toxic conditions are prevented from occurring.
- (9) **pH** means the negative logarithm of the hydrogen ion concentration.

- (10) **Primary contact recreation** means activities where a person would have direct contact with water to the point of complete submergence, including but not limited to skin diving, swimming, and water skiing.
- (11) **Regional Administrator** means the Administrator of EPA's Region X.
- (12) **Reservation** means all land within the limits of the Colville Indian Reservation, established on July 2, 1872 by Executive Order, presently containing 1,389,000 acres more or less, and under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation.
- (13) **Secondary contact recreation** means activities where a person's water contact would be limited to the extent that bacterial infections of eyes, ears, respiratory, or digestive systems or urogenital areas would normally be avoided (such as wading or fishing).
- (14) **Surface water** means all water above the surface of the ground within the exterior boundaries of the Colville Indian Reservation including but not limited to lakes, ponds, reservoirs, artificial impoundments, streams, rivers, springs, seeps and wetlands.
- (15) **Temperature** means water temperature expressed in Centigrade degrees (C).
- (16) **Total dissolved solids** (TDS) means the total filterable residue that passes through a standard glass fiber filter disk and remains after evaporation and drying to a constant weight at 180 degrees C. it is considered to be a measure of the dissolved salt content of the water.
- (17) **Toxicity** means acute and/or chronic toxicity.
- (18) **Tribe or Tribes** means the Colville Confederated Tribes.
- (19) **Turbidity** means the clarity of water expressed as nephelometric turbidity units (NTU) and measured with a calibrated turbidimeter.
- (20) **Wildlife habitat** means the waters and surrounding land areas of the Reservation used by fish, other aquatic life and wildlife at any stage of their life history or activity.
- (e) **General considerations.** The following general guidelines shall apply to the water quality standards and classifications set forth in the use designation Sections.
 - (1) **Classification boundaries.** At the boundary between waters of different classifications, the water quality standards for the higher classification shall prevail.
 - (2) **Antidegradation policy.** This antidegradation policy shall be applicable to all surface waters of the Reservation.
 - (i) Existing in-stream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
 - (ii) Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the Regional Administrator finds, after full satisfaction of the inter-governmental coordination and public participation provisions of the Tribes' continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the Regional Administrator shall assure water quality adequate to protect existing uses fully. Further, the Regional Administrator shall assure that

there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

- (iii) Where high quality waters are identified as constituting an outstanding national or reservation resource, such as waters within areas designated as unique water quality management areas and waters otherwise of exceptional recreational or ecological significance, and are designated as special resource waters, that water quality shall be maintained and protected.
- (iv) In those cases where potential water quality impairment associated with a thermal discharge is involved, this antidegradation policy's implementing method shall be consistent with section 316 of the Clean Water Act.

(3) ***Aesthetic qualities.*** All waters within the Reservation, including those within mixing zones, shall be free from substances, attributable to wastewater discharges or other pollutant sources, that:

- (i) Settle to form objectionable deposits;
- (ii) Float as debris, scum, oil, or other matter forming nuisances;
- (iii) Produce objectionable color, odor, taste, or turbidity;
- (iv) Cause injury to, are toxic to, or produce adverse physiological responses in humans, animals, or plants; or
- (v) produce undesirable or nuisance aquatic life.

(4) ***Analytical methods.***

- (i) The analytical testing methods used to measure or otherwise evaluate compliance with water quality standards shall to the extent practicable, be in accordance with the "Guidelines Establishing Test Procedures for the Analysis of Pollutants" (40 CFR part 136). When a testing method is not available for a particular substance, the most recent edition of "Standard Methods for the Examination of Water and Wastewater" (published by the American Public Health Association, American Water Works Association, and the Water Pollution Control Federation) and other or superseding methods published and/or approved by EPA shall be used.

(f) ***General water use and criteria classes.*** The following criteria shall apply to the various classes of surface waters on the Colville Indian Reservation:

(1) ***Class I (Extraordinary)*** –

- (i) ***Designated uses.*** The designated uses include, but are not limited to, the following:
 - (A) Water supply (domestic, industrial, agricultural).
 - (B) Stock watering.
 - (C) Fish and shellfish: Salmonid migration, rearing, spawning, and harvesting; other fish migration, rearing, spawning, and harvesting.
 - (D) Wildlife habitat.
 - (E) Ceremonial and religious water use.
 - (F) Recreation (primary contact recreation, sport fishing, boating and aesthetic enjoyment).

(G) Commerce and navigation.

(ii) **Water quality criteria.**

- (A) Bacteriological Criteria. The geometric mean of the enterococci bacteria densities in samples taken over a 30 day period shall not exceed 8 per 100 milliliters, nor shall any single sample exceed an enterococci density of 35 per 100 milliliters. These limits are calculated as the geometric mean of the collected samples approximately equally spaced over a thirty day period.
- (B) Dissolved oxygen—The dissolved oxygen shall exceed 9.5 mg/l.
- (C) Total dissolved gas—concentrations shall not exceed 110 percent of the saturation value for gases at the existing atmospheric and hydrostatic pressures at any point of sample collection.
- (D) Temperature—shall not exceed 16.0 degrees C due to human activities. Temperature increases shall not, at any time, exceed $t = 23/(T + 5)$.
 - (1) When natural conditions exceed 16.0 degrees C, no temperature increase will be allowed which will raise the receiving water by greater than 0.3 degrees C.
 - (2) For purposes hereof, “t” represents the permissive temperature change across the dilution zone; and “T” represents the highest existing temperature in this water classification outside of any dilution zone.
 - (3) Provided that temperature increase resulting from nonpoint source activities shall not exceed 2.8 degrees C, and the maximum water temperature shall not exceed 10.3 degrees C.
- (E) pH shall be within the range of 6.5 to 8.5 with a human-caused variation of less than 0.2 units.
- (F) Turbidity shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
- (G) Toxic, radioactive, nonconventional, or deleterious material concentrations shall be less than those of public health significance, or which may cause acute or chronic toxic conditions to the aquatic biota, or which may adversely affect designated water uses.

(2) **Class II (Excellent) —**

- (i) **Designated uses.** The designated uses include but are not limited to, the following:
 - (A) Water supply (domestic, industrial, agricultural).
 - (B) Stock watering.
 - (C) Fish and shellfish: Salmonid migration, rearing, spawning, and harvesting; other fish migration, rearing, spawning, and harvesting; crayfish rearing, spawning, and harvesting.
 - (D) Wildlife habitat.
 - (E) Ceremonial and religious water use.
 - (F) Recreation (primary contact recreation, sport fishing, boating and aesthetic enjoyment).

(G) Commerce and navigation.

(ii) **Water quality criteria.**

- (A) Bacteriological Criteria—The geometric mean of the enterococci bacteria densities in samples taken over a 30 day period shall not exceed 16/100 ml, nor shall any single sample exceed an enterococci density of 75 per 100 milliliters. These limits are calculated as the geometric mean of the collected samples approximately equally spaced over a thirty day period.
- (B) Dissolved oxygen—The dissolved oxygen shall exceed 8.0 mg/l.
- (C) Total dissolved gas—concentrations shall not exceed 110 percent of the saturation value for gases at the existing atmospheric and hydrostatic pressures at any point of sample collection.
- (D) Temperature—shall not exceed 18.0 degrees C due to human activities. Temperature increases shall not, at any time, exceed $t = 28/(T + 7)$.
 - (1) When natural conditions exceed 18 degrees C no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3 degrees C.
 - (2) For purposes hereof, “t” represents the permissive temperature change across the dilution zone; and “T” represents the highest existing temperature in this water classification outside of any dilution zone.
 - (3) Provided that temperature increase resulting from non-point source activities shall not exceed 2.8 degrees C, and the maximum water temperature shall not exceed 18.3 degrees C.
- (E) pH shall be within the range of 6.5 to 8.5 with a human-caused variation of less than 0.5 units.
- (F) Turbidity shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
- (G) Toxic, radioactive, nonconventional, or deleterious material concentrations shall be less than those of public health significance, or which may cause acute or chronic toxic conditions to the aquatic biota, or which may adversely affect designated water uses.

(3) **Class III (Good) —**

(i) **Designated uses.** The designated uses include but are not limited to, the following:

- (A) Water supply (industrial, agricultural).
- (B) Stock watering.
- (C) Fish and shellfish: Salmonid migration, rearing, spawning, and harvesting; other fish migration, rearing, spawning, and harvesting; crayfish rearing, spawning, and harvesting.
- (D) Wildlife habitat.
- (E) Recreation (secondary contact recreation, sport fishing, boating and aesthetic enjoyment).

(F) Commerce and navigation.

(ii) **Water quality criteria.**

(A) Bacteriological Criteria—The geometric mean of the enterococci bacteria densities in samples taken over a 30 day period shall not exceed 33/100 ml, nor shall any single sample exceed an enterococci density of 150 per 100 milliliters. These limits are calculated as the geometric mean of the collected samples approximately equally spaced over a thirty day period.

(B) Dissolved oxygen.

	Early life stages ^{1 2}	Other life stages
7 day mean	9.5 (6.5)	³ NA
1 day minimum ⁴	8.0 (5.0)	6.5

¹ These are water column concentrations recommended to achieve the required intergravel dissolved oxygen concentrations shown in parentheses. The 3 mg/L differential is discussed in the dissolved oxygen criteria document (EPA 440/5-86-003, April 1986). For species that have early life stages exposed directly to the water column, the figures in parentheses apply.

² Includes all embryonic and larval stages and all juvenile forms to 30-days following hatching.

³ NA (not applicable)

⁴ All minima should be considered as instantaneous concentrations to be achieved at all times.

(C) Total dissolved gas concentrations shall not exceed 110 percent of the saturation value for gases at the existing atmospheric and hydrostatic pressures at any point of sample collection.

(D) Temperature shall not exceed 21.0 degrees C due to human activities. Temperature increases shall not, at any time, exceed $t = 34/(T + 9)$.

(1) When natural conditions exceed 21.0 degrees C no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3 degrees C.

(2) For purposes hereof, "t" represents the permissive temperature change across the dilution zone; and "T" represents the highest existing temperature in this water classification outside of any dilution zone.

(3) Provided that temperature increase resulting from nonpoint source activities shall not exceed 2.8 degrees C, and the maximum water temperature shall not exceed 21.3 degrees C.

(E) pH shall be within the range of 6.5 to 8.5 with a human-caused variation of less than 0.5 units.

(F) Turbidity shall not exceed 10 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 20 percent increase in turbidity when the background turbidity is more than 50 NTU.

- (G) Toxic, radioactive, nonconventional, or deleterious material concentrations shall be less than those of public health significance, or which may cause acute or chronic toxic conditions to the aquatic biota, or which may adversely affect designated water uses.

(4) **Class IV (Fair) –**

- (i) **Designated uses.** The designated uses include but are not limited to, the following:

- (A) Water supply (industrial).
- (B) Stock watering.
- (C) Fish (salmonid and other fish migration).
- (D) Recreation (secondary contact recreation, sport fishing, boating and aesthetic enjoyment).
- (E) Commerce and navigation.

- (ii) **Water quality criteria.**

- (A) Dissolved oxygen.

	During periods of salmonid and other fish migration	During all other time periods
30 day mean	6.5	5.5
7 day mean	¹ NA	¹ NA
7 day mean minimum	5.0	4.0
1 day minimum ²	4.0	3.0

¹ NA (not applicable).

² All minima should be considered as instantaneous concentrations to be achieved at all times.

- (B) Total dissolved gas—concentrations shall not exceed 110 percent of the saturation value for gases at the existing atmospheric and hydrostatic pressures at any point of sample collection.
- (C) Temperature shall not exceed 22.0 degrees C due to human activities. Temperature increases shall not, at any time, exceed $t = 20/(T + 2)$.
 - (1) When natural conditions exceed 22.0 degrees C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3 degrees C.
 - (2) For purposes hereof, “t” represents the permissive temperature change across the dilution zone; and “T” represents the highest existing temperature in this water classification outside of any dilution zone.
- (D) pH shall be within the range of 6.5 to 9.0 with a human-caused variation of less than 0.5 units.

- (E) Turbidity shall not exceed 10 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 20 percent increase in turbidity when the background turbidity is more than 50 NTU.
- (F) Toxic, radioactive, nonconventional, or deleterious material concentrations shall be less than those of public health significance, or which may cause acute or chronic toxic conditions to the aquatic biota, or which may adversely affect designated water uses.

(5) **Lake Class** —

(i) **Designated uses.** The designated uses include but are not limited to, the following:

- (A) Water supply (domestic, industrial, agricultural).
- (B) Stock watering.
- (C) Fish and shellfish: Salmonid migration, rearing, spawning, and harvesting; other fish migration, rearing, spawning, and harvesting; crayfish rearing, spawning, and harvesting.
- (D) Wildlife habitat.
- (E) Ceremonial and religious water use.
- (F) Recreation (primary contact recreation, sport fishing, boating and aesthetic enjoyment).
- (G) Commerce and navigation.

(ii) **Water quality criteria.**

- (A) Bacteriological Criteria. The geometric mean of the enterococci bacteria densities in samples taken over a 30 day period shall not exceed 33/100 ml, nor shall any single sample exceed an enterococci density of 150 per 100 milliliters. These limits are calculated as the geometric mean of the collected samples approximately equally spaced over a thirty day period.
- (B) Dissolved oxygen—no measurable decrease from natural conditions.
- (C) Total dissolved gas concentrations shall not exceed 110 percent of the saturation value for gases at the existing atmospheric and hydrostatic pressures at any point of sample collection.
- (D) Temperature—no measurable change from natural conditions.
- (E) pH—no measurable change from natural conditions.
- (F) Turbidity shall not exceed 5 NTU over natural conditions.
- (G) Toxic, radioactive, nonconventional, or deleterious material concentrations shall be less than those which may affect public health, the natural aquatic environment, or the desirability of the water for any use.

(6) **Special Resource Water Class (SRW)** —

(i) **General characteristics.** These are fresh or saline waters which comprise a special and unique resource to the Reservation. Water quality of this class will be varied and unique as determined by the Regional Administrator in cooperation with the Tribes.

(ii) **Designated uses.** The designated uses include, but are not limited to, the following:

- (A) Wildlife habitat.
- (B) Natural foodchain maintenance.

(iii) Water quality criteria.

- (A) Enterococci bacteria densities shall not exceed natural conditions.
- (B) Dissolved oxygen—shall not show any measurable decrease from natural conditions.
- (C) Total dissolved gas shall not vary from natural conditions.
- (D) Temperature—shall not show any measurable change from natural conditions.
- (E) pH shall not show any measurable change from natural conditions.
- (F) Settleable solids shall not show any change from natural conditions.
- (G) Turbidity shall not exceed 5 NTU over natural conditions.
- (H) Toxic, radioactive, or deleterious material concentrations shall not exceed those found under natural conditions.

(g) **General classifications.** General classifications applying to various surface waterbodies not specifically classified under § 131.35(h) are as follows:

- (1) All surface waters that are tributaries to Class I waters are classified Class I, unless otherwise classified.
- (2) Except for those specifically classified otherwise, all lakes with existing average concentrations less than 2000 mg/L TDS and their feeder streams on the Colville Indian Reservation are classified as Lake Class and Class I, respectively.
- (3) All lakes on the Colville Indian Reservation with existing average concentrations of TDS equal to or exceeding 2000 mg/L and their feeder streams are classified as Lake Class and Class I respectively unless specifically classified otherwise.
- (4) All reservoirs with a mean detention time of greater than 15 days are classified Lake Class.
- (5) All reservoirs with a mean detention time of 15 days or less are classified the same as the river section in which they are located.
- (6) All reservoirs established on pre-existing lakes are classified as Lake Class.
- (7) All wetlands are assigned to the Special Resource Water Class.
- (8) All other waters not specifically assigned to a classification of the reservation are classified as Class II.

(h) **Specific classifications.** Specific classifications for surface waters of the Colville Indian Reservation are as follows:

(1) Streams:
Alice Creek

Class III

Anderson Creek	Class III
Armstrong Creek	Class III
Barnaby Creek	Class II
Bear Creek	Class III
Beaver Dam Creek	Class II
Bridge Creek	Class II
Brush Creek	Class III
Buckhorn Creek	Class III
Cache Creek	Class III
Canteen Creek	Class I
Capoose Creek	Class III
Cobbs Creek	Class III
Columbia River from Chief Joseph Dam to Wells Dam	
Columbia River from northern Reservation boundary to Grand Coulee Dam (Roosevelt Lake)	
Columbia River from Grand Coulee Dam to Chief Joseph Dam	
Cook Creek	Class I
Cooper Creek	Class III
Cornstalk Creek	Class III
Cougar Creek	Class I
Coyote Creek	Class II
Deerhorn Creek	Class III
Dick Creek	Class III
Dry Creek	Class I
Empire Creek	Class III
Faye Creek	Class I
Forty Mile Creek	Class III
Gibson Creek	Class I
Gold Creek	Class II
Granite Creek	Class II
Grizzly Creek	Class III
Haley Creek	Class III
Hall Creek	Class II
Hall Creek, West Fork	Class I
Iron Creek	Class III
Jack Creek	Class III
Jerred Creek	Class I
Joe Moses Creek	Class III
John Tom Creek	Class III
Jones Creek	Class I
Kartar Creek	Class III

Kincaid Creek	Class III
King Creek	Class III
Klondyke Creek	Class I
Lime Creek	Class III
Little Jim Creek	Class III
Little Nespelem	Class II
Louie Creek	Class III
Lynx Creek	Class II
Manila Creek	Class III
McAllister Creek	Class III
Meadow Creek	Class III
Mill Creek	Class II
Mission Creek	Class III
Nespelem River	Class II
Nez Perce Creek	Class III
Nine Mile Creek	Class II
Nineteen Mile Creek	Class III
No Name Creek	Class II
North Nanamkin Creek	Class III
North Star Creek	Class III
Okanogan River from Reservation north boundary to Columbia River	Class II
Olds Creek	Class I
Omak Creek	Class II
Onion Creek	Class II
Parmenter Creek	Class III
Peel Creek	Class III
Peter Dan Creek	Class III
Rock Creek	Class I
San Poil River	Class I
Sanpoil, River West Fork	Class II
Seventeen Mile Creek	Class III
Silver Creek	Class III
Sitdown Creek	Class III
Six Mile Creek	Class III
South Nanamkin Creek	Class III
Spring Creek	Class III
Stapaloop Creek	Class III
Stepstone Creek	Class III
Stranger Creek	Class II
Strawberry Creek	Class III

Swimptkin Creek	Class III
Three Forks Creek	Class I
Three Mile Creek	Class III
Thirteen Mile Creek	Class II
Thirty Mile Creek	Class II
Trail Creek	Class III
Twentyfive Mile Creek	Class III
Twentyone Mile Creek	Class III
Twentythree Mile Creek	Class III
Wannacot Creek	Class III
Wells Creek	Class I
Whitelaw Creek	Class III
Wilmont Creek	Class II
(2) Lakes:	
Apex Lake	LC
Big Goose Lake	LC
Bourgeau Lake	LC
Buffalo Lake	LC
Cody Lake	LC
Crawfish Lakes	LC
Camille Lake	LC
Elbow Lake	LC
Fish Lake	LC
Gold Lake	LC
Great Western Lake	LC
Johnson Lake	LC
LaFleur Lake	LC
Little Goose Lake	LC
Little Owhi Lake	LC
McGinnis Lake	LC
Nicholas Lake	LC
Omak Lake	SRW
Owhi Lake	SRW
Penley Lake	SRW
Rebecca Lake	LC
Round Lake	LC
Simpson Lake	LC
Soap Lake	LC
Sugar Lake	LC
Summit Lake	LC

Twin Lakes

SRW

[54 FR 28625, July 6, 1989]

§ 131.36 Toxics criteria for those states not complying with Clean Water Act section 303(c)(2)(B).

(a) **Scope.** This section is not a general promulgation of the section 304(a) criteria for priority toxic pollutants but is restricted to specific pollutants in specific States.

(b)

(1) EPA's Section 304(a) criteria for Priority Toxic Pollutants.

A		B Freshwater		C Saltwater		D Human Health (10 ⁻⁶ risk for carcinogens) For consumption of:	
(#) Compound	CAS Number	Criterion Maximum Conc. ^d (µg/L) (B1)	Criterion Continuous Conc. ^d (µg/L) (B2)	Criterion Maximum Conc. ^d (µg/L) (C1)	Criterion Continuous Conc. ^d (µg/L) (C2)	Water & Organisms (µg/L) (D1)	Organisms Only (µg/L) (D2)
1 Antimony	7440360					14 a	4300 a
2 Arsenic	7440382	360 m	190 m	69 m	36 m	0.018 abc	0.14 abc
3 Beryllium	7440417					n	n
4 Cadmium	7440439	3.7 e	1.0 e	42 m	9.3 m	n	n
5a Chromium (III)	16065831	550 e	180 e			n	n
b Chromium (VI)	18540299	15 m	10 m	1100 m	50 m	n	n
6 Copper	7440508	17 e	11 e	2.4 m	2.4 m		
7 Lead	7439921	65 e	2.5 e	210 m	8.1 m	n	n
8 Mercury	7439976	2.1 m	0.012 ip	1.8 m	0.025 ip	0.14	0.15
9 Nickel	7440020	1400 e	160 e	74 m	8.2 m	610 a	4600 a
10 Selenium	7782492	20 p	5 p	290 m	71 m	n	n
11 Silver	7440224	3.4 e		1.9 m			
12 Thallium	7440280					1.7 a	6.3 a
13 Zinc	7440666	110 e	100 e	90 m	81 m		
14 Cyanide	57125	22	5.2	1	1	700 a	220000 aj
15 Asbestos	1332214					7,000,000 fibers/L k	
16 2,3,7,8-TCDD (Dioxin)	1746016					0.000000013 c	0.000000014 c
17 Acrolein	107028					320	780
18 Acrylonitrile	107131					0.059 ac	0.66 ac
19 Benzene	71432					1.2 ac	71 ac
20 Bromoform	75252					4.3 ac	360 ac
21 Carbon Tetrachloride	56235					0.25 ac	4.4 ac
22 Chlorobenzene	108907					680 a	21000 aj
23 Chlorodibromomethane	124481					0.41 ac	34 ac
24 Chloroethane	75003						
25 2-Chloroethylvinyl Ether	110758						
26 Chloroform	67663					5.7 ac	470 ac
27 Dichlorobromomethane	75274					0.27 ac	22 ac
28 1,1-Dichloroethane	75343						

A		B Freshwater		C Saltwater		D Human Health (10 ⁻⁶ risk for carcinogens) For consumption of:	
(#) Compound	CAS Number	Criterion Maximum Conc. ^d (µg/L) (B1)	Criterion Continuous Conc. ^d (µg/L) (B2)	Criterion Maximum Conc. ^d (µg/L) (C1)	Criterion Continuous Conc. ^d (µg/L) (C2)	Water & Organisms (µg/L) (D1)	Organisms Only (µg/L) (D2)
29 1,2-Dichloroethane	107062					0.38 ac	99 ac
30 1,1-Dichloroethylene	75354					0.057 ac	3.2 ac
31 1,2-Dichloropropane	78875						
32 1,3-Dichloropropylene	542756					10 a	1700 a
33 Ethylbenzene	100414					3100 a	29000 a
34 Methyl Bromide	74839					48 a	4000 a
35 Methyl Chloride	74873					n	n
36 Methylene Chloride	75092					4.7 ac	1600 ac
37 1,1,2,2-Tetrachloroethane	79345					0.17 ac	11 ac
38 Tetrachloroethylene	127184					0.8 c	8.85 c
39 Toluene	108883					6800 a	200000 a
40 1,2-Trans-Dichloroethylene	156605						
41 1,1,1-Trichloroethane	71556					n	n
42 1,1,2-Trichloroethane	79005					0.60 ac	42 ac
43 Trichloroethylene	79016					2.7 c	81 c
44 Vinyl Chloride	75014					2 c	525 c
45 2-Chlorophenol	95578						
46 2,4-Dichlorophenol	120832					93 a	790 aj
47 2,4-Dimethylphenol	105679						
48 2-Methyl-4,6-Dinitrophenol	534521					13.4	765
49 2,4-Dinitrophenol	51285					70 a	14000 a
50 2-Nitrophenol	88755						
51 4-Nitrophenol	100027						
52 3-Methyl-4-Chlorophenol	59507						
53 Pentachlorophenol	87865	20 f	13 f	13	7.9	0.28 ac	8.2 acj
54 Phenol	108952					21000 a	4600000 aj
55 2,4,6-Trichlorophenol	88062					2.1 ac	6.5 ac
56 Acenaphthene	83329						
57 Acenaphthylene	208968						

A		B Freshwater		C Saltwater		D Human Health (10 ⁻⁶ risk for carcinogens) For consumption of:	
(#) Compound	CAS Number	Criterion Maximum Conc. ^d (µg/L) (B1)	Criterion Continuous Conc. ^d (µg/L) (B2)	Criterion Maximum Conc. ^d (µg/L) (C1)	Criterion Continuous Conc. ^d (µg/L) (C2)	Water & Organisms (µg/L) (D1)	Organisms Only (µg/L) (D2)
58 Anthracene	120127					9600 a	110000 a
59 Benzidine	92875					0.00012 ac	0.00054 ac
60 Benzo(a)Anthracene	56553					0.0028 c	0.031 c
61 Benzo(a)Pyrene	50328					0.0028 c	0.031 c
62 Benzo(b)Fluoranthene	205992					0.0028 c	0.031 c
63 Benzo(ghi)Perylene	191242						
64 Benzo(k)Fluoranthene	207089					0.0028 c	0.031 c
65 Bis(2-Chloroethoxy)Methane	111911						
66 Bis(2-Chloroethyl)Ether	111444					0.031 ac	1.4 ac
67 Bis(2-Chloroisopropyl)Ether	108601					1400 a	170000 a
68 Bis(2-Ethylhexyl)Phthalate	117817					1.8 ac	5.9 ac
69 4-Bromophenyl Phenyl Ether	101553						
70 Butylbenzyl Phthalate	85687						
71 2-Chloronaphthalene	91587						
72 4-Chlorophenyl Phenyl Ether	7005723						
73 Chrysene	218019					0.0028 c	0.031 c
74 Dibenzo(ah)Anthracene	53703					0.0028 c	0.031 c
75 1,2-Dichlorobenzene	95501					2700 a	17000 a
76 1,3-Dichlorobenzene	541731					400	2600
77 1,4-Dichlorobenzene	106467					400	2600
78 3,3'-Dichlorobenzidine	91941					0.04 ac	0.077 ac
79 Diethyl Phthalate	84662					23000 a	120000 a
80 Dimethyl Phthalate	131113					313000	2900000
81 Di-n-Butyl Phthalate	84742					2700 a	12000 a
82 2,4-Dinitrotoluene	121142					0.11 c	9.1 c
83 2,6-Dinitrotoluene	606202						
84 Di-n-Octyl Phthalate	117840						
85 1,2-Diphenylhydrazine	122667					0.040 ac	0.54 ac
86 Fluoranthene	206440					300 a	370 a

A		B Freshwater		C Saltwater		D Human Health (10 ⁻⁶ risk for carcinogens) For consumption of:	
(#) Compound	CAS Number	Criterion Maximum Conc. ^d (µg/L) (B1)	Criterion Continuous Conc. ^d (µg/L) (B2)	Criterion Maximum Conc. ^d (µg/L) (C1)	Criterion Continuous Conc. ^d (µg/L) (C2)	Water & Organisms (µg/L) (D1)	Organisms Only (µg/L) (D2)
87 Fluorene	86737					1300 a	14000 a
88 Hexachlorobenzene	118741					0.00075 ac	0.00077 ac
89 Hexachlorobutadiene	87683					0.44 ac	50 ac
90 Hexachlorocyclopentadiene	77474					240 a	17000 aj
91 Hexachloroethane	67721					1.9 ac	8.9 ac
92 Indeno(1,2,3-cd)Pyrene	193395					0.0028 c	0.031 c
93 Isophorone	78591					8.4 ac	600 ac
94 Naphthalene	91203						
95 Nitrobenzene	98953					17 a	1900 aj
96 N-Nitrosodimethylamine	62759					0.00069 ac	8.1 ac
97 N-Nitrosodi-n-Propylamine	621647						
98 N-Nitrosodiphenylamine	86306					5.0 ac	16 ac
99 Phenanthrene	85018						
100 Pyrene	129000					960 a	11000 a
101 1,2,4-Trichlorobenzene	120821						
102 Aldrin	309002	3 g		1.3 g		0.00013 ac	0.00014 ac
103 alpha-BHC	319846					0.0039 ac	0.013 ac
104 beta-BHC	319857					0.014 ac	0.046 ac
105 gamma-BHC	58899	2 g	0.08 g	0.16 g		0.019 c	0.063 c
106 delta-BHC	319868						
107 Chlordane	57749	2.4 g	0.0043 g	0.09 g	0.004 g	0.00057 ac	0.00059 ac
108 4,4'-DDT	50293	1.1 g	0.001 g	0.13 g	0.001 g	0.00059 ac	0.00059 ac
109 4,4'-DDE	72559					0.00059 ac	0.00059 ac
110 4,4'-DDD	72548					0.00083 ac	0.00084 ac
111 Dieldrin	60571	2.5 g	0.0019 g	0.71 g	0.0019 g	0.00014 ac	0.00014 ac
112 alpha-Endosulfan	959988	0.22 g	0.056 g	0.034 g	0.0087 g	0.93 a	2.0 a
113 beta-Endosulfan	33213659	0.22 g	0.056 g	0.034 g	0.0087 g	0.93 a	2.0 a
114 Endosulfan Sulfate	1031078					0.93 a	2.0 a
115 Endrin	72208	0.18 g	0.0023 g	0.037 g	0.0023 g	0.76 a	0.81 aj

A		B Freshwater		C Saltwater		D Human Health (10 ⁻⁶ risk for carcinogens) For consumption of:	
(#) Compound	CAS Number	Criterion Maximum Conc. ^d (µg/L) (B1)	Criterion Continuous Conc. ^d (µg/L) (B2)	Criterion Maximum Conc. ^d (µg/L) (C1)	Criterion Continuous Conc. ^d (µg/L) (C2)	Water & Organisms (µg/L) (D1)	Organisms Only (µg/L) (D2)
116 Endrin Aldehyde	7421934					0.76 a	0.81 aj
117 Heptachlor	76448	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00021 ac	0.00021 ac
118 Heptachlor Epoxide	1024573	0.52 g	0.0038 g	0.053 g	0.0036 g	0.00010 ac	0.00011 ac
119 PCB-1242	53469219		0.014 g		0.03 g		
120 PCB-1254	11097691		0.014 g		0.03 g		
121 PCB-1221	11104282		0.014 g		0.03 g		
122 PCB-1232	11141165		0.014 g		0.03 g		
123 PCB-1248	12672296		0.014 g		0.03 g		
124 PCB-1260	11096825		0.014 g		0.03 g		
125a PCB-1016	12674112		0.014 g		0.03 g		
125b Polychlorinated biphenyls (PCBs)						0.00017 q	0.00017 q
126 Toxaphene	8001352	0.73	0.0002	0.21	0.0002	0.00073 ac	0.00075 ac
Total Number of Criteria (h) =		24	29	23	27	85	84

Footnotes

a. Criteria revised to reflect current agency q_1^* or RfD, as contained in the Integrated Risk Information System (IRIS). The fish tissue bioconcentration factor (BCF) from the 1980 criteria documents was retained in all cases.

b. The criteria refers to the inorganic form only.

c. Criteria in the matrix based on carcinogenicity (10^{-6} risk). For a risk level of 10^{-5} , move the decimal point in the matrix value one place to the right.

d. Criteria Maximum Concentration (CMC) = the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (1-hour average) without deleterious effects. Criteria Continuous Concentration (CCC) = the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. $\mu\text{g/L}$ = micrograms per liter.

e. Freshwater aquatic life criteria for these metals are expressed as a function of total hardness (mg/L as CaCO_3), the pollutant's water effect ratio (WER) as defined in § 131.36(c) and multiplied by an appropriate dissolved conversion factor as defined in § 131.36(b)(2). For comparative purposes, the values displayed in this matrix are shown as dissolved metal and correspond to a total hardness of 100 mg/L and a water effect ratio of 1.0.

f. Freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows. Values displayed above in the matrix correspond to a pH of 7.8.

$$\text{CMC} = \exp(1.005(\text{pH}) - 4.830)$$

$$\text{CCC} = \exp(1.005(\text{pH}) - 5.290)$$

g. Aquatic life criteria for these compounds were issued in 1980 utilizing the 1980 Guidelines for criteria development. The acute values shown are final acute values (FAV) which by the 1980 Guidelines are instantaneous values as contrasted with a CMC which is a one-hour average.

h. These totals simply sum the criteria in each column. For aquatic life, there are 31 priority toxic pollutants with some type of freshwater or saltwater, acute or chronic criteria. For human health, there are 85 priority toxic pollutants with either "water + fish" or "fish only" criteria. Note that these totals count chromium as one pollutant even though EPA has developed criteria based on two valence states. In the matrix, EPA has assigned numbers 5a and 5b to the criteria for chromium to reflect the fact that the list of 126 priority toxic pollutants includes only a single listing for chromium.

i. If the CCC for total mercury exceeds $0.012 \mu\text{g/l}$ more than once in a 3-year period in the ambient water, the edible portion of aquatic species of concern must be analyzed to determine whether the concentration of methyl mercury exceeds the FDA action level (1.0 mg/kg). If the FDA action level is exceeded, the State must notify the appropriate EPA Regional Administrator, initiate a revision of its mercury criterion in its water quality standards so as to protect designated uses, and take other appropriate action such as issuance of a fish consumption advisory for the affected area.

j. No criteria for protection of human health from consumption of aquatic organisms (excluding water) was presented in the 1980 criteria document or in the 1986 Quality Criteria for Water. Nevertheless, sufficient information was presented in the 1980 document to allow a calculation of a criterion, even though the results of such a calculation were not shown in the document.

k. The criterion for asbestos is the MCL (56 FR 3526, January 30, 1991).

l. [Reserved: This letter not used as a footnote.]

m. Criteria for these metals are expressed as a function of the water effect ratio, WER, as defined in 40 CFR 131.36(c).

CMC = column B1 or C1 value \times WER

CCC = column B2 or C2 value \times WER

n. EPA is not promulgating human health criteria for this contaminant. However, permit authorities should address this contaminant in NPDES permit actions using the State's existing narrative criteria for toxics.

o. [Reserved: This letter not used as a footnote.]

p. Criterion expressed as total recoverable.

q. This criterion applies to total PCBs (e.g., the sum of all congener or isomer or homolog or Aroclor analyses).

General Notes

1. This chart lists all of EPA's priority toxic pollutants whether or not criteria recommendations are available. Blank spaces indicate the absence of criteria recommendations. Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in Appendix A of 40 CFR Part 423. EPA has added the Chemical Abstracts Service (CAS) registry numbers, which provide a unique identification for each chemical.

2. The following chemicals have organoleptic based criteria recommendations that are not included on this chart (for reasons which are discussed in the preamble): copper, zinc, chlorobenzene, 2-chlorophenol, 2,4-dichlorophenol, acenaphthene, 2,4-dimethylphenol, 3-methyl-4-chlorophenol, hexachlorocyclopentadiene, pentachlorophenol, phenol.

3. For purposes of this rulemaking, freshwater criteria and saltwater criteria apply as specified in 40 CFR 131.36(c).

Note to paragraph (b)(1): On April 14, 1995, the Environmental Protection Agency issued a stay of certain criteria in paragraph (b)(1) of this section as follows: the criteria in columns B and C for arsenic, cadmium, chromium (VI), copper, lead, nickel, silver, and zinc; the criteria in B1 and C1 for mercury; the criteria in column B for chromium (III); and the criteria in column C

for selenium. The stay remains in effect until further notice.

(2) Factors for Calculating Hardness-Dependent, Freshwater Metals Criteria

$$\text{CMC} = \text{WER} \exp \{ m_A [\ln(\text{hardness})] + b_A \} \times \text{Acute Conversion Factor}$$

$$\text{CCC} = \text{WER} \exp \{ m_C [\ln(\text{hardness})] + b_C \} \times \text{Chronic Conversion Factor}$$

Final CMC and CCC values should be rounded to two significant figures.

Metal	m_A	b_A	m_C	b_C	Freshwater conversion factors	
					Acute	Chronic
Cadmium	1.128	-3.828	0.7852	-3.490	^a 0.944	^a 0.909
Chromium (III)	0.8190	3.688	0.8190	1.561	0.316	0.860
Copper	0.9422	-1.464	0.8545	-1.465	0.960	0.960
Lead	1.273	-1.460	1.273	-4.705	^a 0.791	^a 0.791
Nickel	0.8460	3.3612	0.8460	1.1645	0.998	0.997
Silver	1.72	-6.52	^b N/A	^b N/A	0.85	^b N/A
Zinc	0.8473	0.8604	0.8473	0.7614	0.978	0.986

Note to table: The term "exp" represents the base e exponential function.

Footnotes to table:

^a The freshwater conversion factors (CF) for cadmium and lead are hardness-dependent and can be calculated for any hardness [see limitations in § 131.36(c)(4)] using the following equations:

Cadmium

$$\text{Acute: CF} = 1.136672 - [(\ln \text{ hardness})(0.041838)]$$

$$\text{Chronic: CF} = 1.101672 - [(\ln \text{ hardness})(0.041838)]$$

$$\text{Lead (Acute and Chronic): CF} = 1.46203 - [(\ln \text{ hardness})(0.145712)]$$

^b No chronic criteria are available for silver.

(c) *Applicability.* (1) The criteria in paragraph (b) of this section apply to the States' designated uses cited in paragraph (d) of this section and supersede any criteria adopted by the State, except when State regulations contain criteria which are more stringent for a particular use in which case the State's criteria will continue to apply.

(2) The criteria established in this section are subject to the State's general rules of applicability in the same way and to the same extent as are the other numeric toxics criteria when applied to the same use classifications including mixing zones, and low flow values below which numeric standards can be exceeded in flowing fresh waters.

(i) For all waters with mixing zone regulations or implementation procedures, the criteria apply at the appropriate locations within or at the boundary of the mixing zones; otherwise the criteria apply throughout the waterbody including at the end of any discharge pipe, canal or other discharge point.

(ii) A State shall not use a low flow value below which numeric standards can be exceeded that is less stringent than the following for waters suitable for the establishment of low flow return frequencies (*i.e.*, streams and rivers):

Aquatic Life	
Acute criteria (CMC)	1 Q 10 or 1 B 3
Chronic criteria (CCC)	7 Q 10 or 4 B 3
Human Health	
Non-carcinogens	30 Q 5
Carcinogens	Harmonic mean flow

Where:

CMC—criteria maximum concentration—the water quality criteria to protect against acute effects in aquatic life and is the highest instream concentration of a priority toxic pollutant consisting of a one-hour average not to be exceeded more than once every three years on the average;

CCC—criteria continuous concentration—the water quality criteria to protect against chronic effects in aquatic life is the highest instream concentration of a priority toxic pollutant consisting of a 4-day average not to be exceeded more than once every three years on the average;

1 Q 10 is the lowest one day flow with an average recurrence frequency of once in 10 years determined hydrologically;

1 B 3 is biologically based and indicates an allowable exceedence of once every 3 years. It is determined by EPA's computerized method (DFLOW model);

7 Q 10 is the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years determined hydrologically;

4 B 3 is biologically based and indicates an allowable exceedence for 4 consecutive days once every 3 years. It is determined by EPA's computerized method (DFLOW model);

30 Q 5 is the lowest average 30 consecutive day low flow with an average recurrence frequency of once in 5 years determined hydrologically; and the harmonic mean flow is a long term mean flow value calculated by dividing the number of daily flows analyzed by the sum of the reciprocals of those daily flows.

(iii) If a State does not have such a low flow value for numeric standards compliance, then none shall apply and the criteria included in paragraph (d) of this section herein apply at all flows.

(3) The aquatic life criteria in the matrix in paragraph (b) of this section apply as follows:

- (i) For waters in which the salinity is equal to or less than 1 part per thousand 95% or more of the time, the applicable criteria are the freshwater criteria in Column B;
- (ii) For waters in which the salinity is equal to or greater than 10 parts per thousand 95% or more of the time, the applicable criteria are the saltwater criteria in Column C; and
- (iii) For waters in which the salinity is between 1 and 10 parts per thousand as defined in paragraphs (c)(3) (i) and (ii) of this section, the applicable criteria are the more stringent of the freshwater or saltwater criteria. However, the Regional Administrator may approve the use of the alternative freshwater or saltwater criteria if scientifically defensible information and data demonstrate that on a site-specific basis the biology of the waterbody is dominated by freshwater aquatic life and that freshwater criteria are more appropriate; or conversely, the biology of the waterbody is dominated by saltwater aquatic life and that saltwater criteria are more appropriate.

(4) ***Application of metals criteria.***

- (i) For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, the minimum hardness allowed for use in those equations shall not be less than 25 mg/l, as calcium carbonate, even if the actual ambient hardness is less than 25 mg/l as calcium carbonate. The maximum hardness value for use in those equations shall not exceed 400 mg/l as calcium carbonate, even if the actual ambient hardness is greater than 400 mg/l as calcium carbonate. The same provisions apply for calculating the metals criteria for the comparisons provided for in paragraph (c)(3)(iii) of this section.
- (ii) The hardness values used shall be consistent with the design discharge conditions established in paragraph (c)(2) of this section for flows and mixing zones.
- (iii) Except where otherwise noted, the criteria for metals (compounds #2, #4-# 11, and #13, in paragraph (b) of this section) are expressed as dissolved metal. For purposes of calculating aquatic life criteria for metals from the equations in footnote m. in the criteria matrix in paragraph (b)(1) of this section and the equations in paragraphs (b)(2) of this section, the water-effect ratio is computed as a specific pollutant's acute or chronic toxicity values measured in water from the site covered by the standard, divided by the respective acute or chronic toxicity value in laboratory dilution water.

(d) ***Criteria for Specific Jurisdictions –***

(1) ***Rhode Island, EPA Region 1.***

- (i) All waters assigned to the following use classifications in the Water Quality Regulations for Water Pollution Control adopted under Chapters 46-12, 42-17.1, and 42-35 of the General Laws of Rhode Island are subject to the criteria in paragraph (d)(1)(ii) of this section, without exception:

6.21 Freshwater
Class A

6.22 Saltwater:
Class SA

Class B

Class C

Class SB

Class SC

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(1)(i) of this section:

Use classification	Applicable criteria
Class A	These classifications are assigned the criteria in Column D1—#2, 68
Class B waters where water supply use is designated	
Class B waters where water supply use is not designated	Each of these classifications is assigned the criteria in: Column D2—#2, 68
Class C;	
Class SA;	
Class SB;	
Class SC	

(iii) The human health criteria shall be applied at the 10⁻⁵ risk level, consistent with the State policy. To determine appropriate value for carcinogens, see footnote c in the criteria matrix in paragraph (b)(1) of this section.

(2) *Vermont, EPA Region 1.*

(i) All waters assigned to the following use classifications in the Vermont Water Quality Standards adopted under the authority of the Vermont Water Pollution Control Act (10 V.S.A., Chapter 47) are subject to the criteria in paragraph (d)(2)(i) of this section, without exception:

Class A

Class B

Class C

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(2)(i) of this section:

Use classification	Applicable criteria
1. Classes A1, A2, B1, B2, B3	These classification are assigned the criterion in:

Use classification	Applicable criteria
	Column B2—#105.

(iii) The human health criteria shall be applied at the State-proposed 10^{-6} risk level.

(3)-(4) Reserved]

(5) *District of Columbia, EPA Region 3.*

(i) All waters assigned to the following use classifications in chapter 11 Title 21 DCMR, Water Quality Standards of the District of Columbia are subject to the criteria in paragraph (d)(5)(ii) of this section, without exception:

1101.2 Class C waters

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classification identified in paragraph (d)(5)(i) of this section:

Use classification	Applicable criteria
1. Class C	This classification is assigned the additional criteria in: Column B2; #10, 118, 126.

(iii) The human health criteria shall be applied at the State-adopted 10^{-6} risk level.

(6) *Florida, EPA Region 4.*

(i) All waters assigned to the following use classifications in Chapter 17-301 of the Florida Administrative Code (i.e., identified in Section 17-302.600) are subject to the criteria in paragraph (d)(6)(ii) of this section, without exception:

Class I

Class II

Class III

- (ii) The following criteria from the matrix paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(6)(i) of this section:

Use classification	Applicable criteria
Class I	This classification is assigned the criteria in: Column D1—#16
Class II	This classification is assigned the criteria in:
Class III (marine)	Column D2—#16
Class III (freshwater)	This classification is assigned the criteria in: Column D2—#16

- (iii) The human health criteria shall be applied at the State-adopted 10^{-6} risk level.

(7)-(8) [Reserved]

(9) **Kansas, EPA Region 7.**

- (i) All waters assigned to the following use classification in the Kansas Department of Health and Environment regulations, K.A.R. 28-16-28b through K.A.R. 28-16-28f, are subject to the criteria in paragraph (d)(9)(ii) of this section, without exception.

Section (2)(A)—Special Aquatic Life Use Waters

Section (2)(B)—Expected Aquatic Life Use Waters

Section (2)(C)—Restricted Aquatic Life Use Waters

Section (3)—Domestic Water Supply.

Section (4)—Food Procurement Use.

- (ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(9)(i) of this section:

Use classification	Applicable criteria
1. Sections (2)(A), (2)(B), (2)(C), (4)	These classifications are each assigned criteria as follows: i. Column B1, #2. ii. Column D2, #12, 21, 29, 39, 46, 68, 79, 81, 86, 93, 104, 114, 118.
2. Section (3)	This classification is assigned all criteria in:

Use classification	Applicable criteria
	Column D1, all except #1, 9, 12, 14, 15, 17, 22, 33, 36, 39, 44, 75, 77, 79, 90, 112, 113, and 115.

(iii) The human health criteria shall be applied at the State-adopted 10^{-6} risk level.

(10) **California, EPA Region 9.**

- (i) All waters assigned any aquatic life or human health use classifications in the Water Quality Control Plans for the various Basins of the State ("Basin Plans"), as amended, adopted by the California State Water Resources Control Board ("SWRCB"), except for ocean waters covered by the Water Quality Control Plan for Ocean Waters of California ("Ocean Plan") adopted by the SWRCB with resolution Number 90-27 on March 22, 1990, are subject to the criteria in paragraph (d)(10)(ii) of this section, without exception. These criteria amend the portions of the existing State standards contained in the Basin Plans. More particularly these criteria amend water quality criteria contained in the Basin Plan Chapters specifying water quality objectives (the State equivalent of federal water quality criteria) for the toxic pollutants identified in paragraph (d)(10)(ii) of this section. Although the State has adopted several use designations for each of these waters, for purposes of this action, the specific standards to be applied in paragraph (d)(10)(ii) of this section are based on the presence in all waters of some aquatic life designation and the presence or absence of the MUN use designation (Municipal and domestic supply). (See Basin Plans for more detailed use definitions.)
- (ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the water and use classifications defined in paragraph (d)(10)(i) of this section and identified below:

Water and use classification	Applicable criteria
Waters of the Sacramento-San Joaquin Delta within Regional Water Board 5	Column C1—pollutant 14. Column C2—pollutant 14.
Waters of the State defined as bays or estuaries except the Sacramento-San Joaquin Delta and San Francisco Bay	These waters are assigned the criteria in: Column B1—pollutants

**The fresh water selenium criteria are included for the San Francisco Bay estuary because high levels of bioaccumulation of selenium in the estuary indicate that the salt water criteria are underprotective for San Francisco Bay.*

Water and use classification	Applicable criteria
	5a and 14
	Column
	B2—pollutants
	5a and 14
	Column
	C1—pollutant
	14
	Column
	C2—pollutant
	14
	Column
	D2—pollutants
	1, 12, 17, 18,
	21, 22, 29, 30,
	32, 33, 37, 38,
	42-44, 46, 48,
	49, 54, 59, 66,
	67, 68, 78-82,
	85, 89, 90, 91,
	93, 95, 96, 98
Waters of the Sacramento—San Joaquin Delta and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) that include a MUN use designation	These waters are assigned the criteria in:
	Column
	B1—pollutants
	5a and 14
	Column
	B2—pollutants
	5a and 14
	Column
	D1—pollutants
	1, 12, 15, 17,
	18, 21, 22, 29,
	30, 32, 33, 37,
	38, 42-48, 49,
	59, 66, 67, 68,
	78-82, 85, 89,
	90, 91, 93, 95,
	96, 98
Waters of the State defined as inland without an MUN use designation	These waters
<i>*The fresh water selenium criteria are included for the San Francisco Bay estuary because high levels of bioaccumulation of selenium in the estuary indicate that the salt water criteria are underprotective for San Francisco Bay.</i>	

Water and use classification	Applicable criteria
	are assigned the criteria in: Column B1—pollutants 5a and 14 Column B2—pollutants 5a and 14 Column D2—pollutants 1, 12, 17, 18, 21, 22, 29, 30, 32, 33, 37, 38, 42-44, 46, 48, 49, 54, 59, 66, 67, 68, 78-82, 85, 89, 90, 91, 93, 95, 96, 98
Waters of the San Joaquin River from the mouth of the Merced River to Vernalis	In addition to the criteria assigned to these waters elsewhere in this rule, these waters are assigned the criteria in: Column B2—pollutant 10
Waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to the mouth of the Merced River	In addition to the criteria assigned to these waters elsewhere in this rule, these waters are assigned the criteria in: Column

**The fresh water selenium criteria are included for the San Francisco Bay estuary because high levels of bioaccumulation of selenium in the estuary indicate that the salt water criteria are underprotective for San Francisco Bay.*

Water and use classification	Applicable criteria
Waters of San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta	<p>B1—pollutant 10 Column B2—pollutant 10</p> <p>These waters are assigned the criteria in: Column B1—pollutants 5a, 10* and 14. Column B2—pollutants 5a, 10* and 14. Column D2—pollutants 1, 12, 17, 18, 21, 22, 29, 30, 32, 33, 37, 38, 42-44, 46, 48, 49, 54, 59, 66, 67, 68, 78-82, 85, 89, 90, 91, 93, 95, 96, 98.</p>
All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that include an MUN use designation and that the State has either excluded or partially excluded from coverage under its Water Quality Control Plan for Inland Surface Waters of California, Tables 1 and 2, or its Water Quality Control Plan for Enclosed Bays and Estuaries of California, Tables 1 and 2, or has deferred applicability of those tables. (Category (a), (b), and (c) waters described on page 6 of Water Quality Control Plan for Inland Surface Waters of California or page 6 of its Water Quality Control Plan for Enclosed Bays and Estuaries of California.)	<p>These waters are assigned the criteria for pollutants for which the State does not apply Table 1 or 2 standards. These criteria are: Column B1—all pollutants Column B2—all pollutants Column D1—all pollutants</p>

**The fresh water selenium criteria are included for the San Francisco Bay estuary because high levels of bioaccumulation of selenium in the estuary indicate that the salt water criteria are underprotective for San Francisco Bay.*

Water and use classification	Applicable criteria
All inland waters of the United States that do not include an MUN use designation and that the State has either excluded or partially excluded from coverage under its Water Quality Control Plan for Inland Surface Waters of California, Tables 1 and 2, or has deferred applicability of these tables. (Category (a), (b), and (c) waters described on page 6 of Water Quality Control Plan for Inland Surface Waters of California.)	except #2 These waters are assigned the criteria for pollutants for which the State does not apply Table 1 or 2 standards. These criteria are: Column B1—all pollutants Column B2—all pollutants Column D2—all pollutants except #2
All enclosed bays and estuaries that are waters of the United States that do not include an MUN designation and that the State has either excluded or partially excluded from coverage under its Water Quality Control Plan for Inland Surface Waters of California, Tables 1 and 2, or its Water Quality Control Plan for Enclosed Bays and Estuaries of California, Tables 1 and 2, or has deferred applicability of those tables. (Category (a), (b), and (c) waters described on page 6 of Water Quality Control Plan for Inland Surface Waters of California or page 6 of its Water Quality Control Plan for Enclosed Bays and Estuaries of California.)	These waters are assigned the criteria for pollutants for which the State does not apply Table 1 or 2 standards. These criteria are: Column B1—all pollutants Column B2—all pollutants Column C1—all pollutants Column C2—all pollutants Column D2—all pollutants

**The fresh water selenium criteria are included for the San Francisco Bay estuary because high levels of bioaccumulation of selenium in the estuary indicate that the salt water criteria are underprotective for San Francisco Bay.*

Water and use classification	Applicable criteria
	except #2
<i>*The fresh water selenium criteria are included for the San Francisco Bay estuary because high levels of bioaccumulation of selenium in the estuary indicate that the salt water criteria are underprotective for San Francisco Bay.</i>	

(iii) The human health criteria shall be applied at the State-adopted 10⁻⁶ risk level.

(11) **Nevada, EPA Region 9.**

- (i) All waters assigned the use classifications in Chapter 445 of the Nevada Administrative Code (NAC), Nevada Water Pollution Control Regulations, which are referred to in paragraph (d)(11)(ii) of this section, are subject to the criteria in paragraph (d)(11)(ii) of this section, without exception. These criteria amend the existing State standards contained in the Nevada Water Pollution Control Regulations. More particularly, these criteria amend or supplement the table of numeric standards in NAC 445.1339 for the toxic pollutants identified in paragraph (d)(11)(ii) of this section.
- (ii) The following criteria from matrix in paragraph (b)(1) of this section apply to the waters defined in paragraph (d)(11)(i) of this section and identified below:

Water and use classification	Applicable criteria
Waters that the State has included in NAC 445.1339 where Municipal or domestic supply is a designated use	These waters are assigned the criteria in: Column B1—pollutant #118 Column B2—pollutant #118 Column D1—pollutants #15, 16, 18, 19, 20, 21, 23, 26, 27, 29, 30, 34, 37, 38, 42, 43, 55, 58-62, 64, 66, 73, 74, 78, 82, 85, 87-89, 91, 92, 96, 98, 100, 103, 104, 105, 114, 116, 117, 118
Waters that the State has included in NAC 445.1339 where Municipal or domestic supply is not a designated use	These waters are assigned the criteria in: Column B1—pollutant #118 Column B2—pollutant #118 Column D2—all pollutants except #2.

(iii) The human health criteria shall be applied at the 10⁻⁵ risk level, consistent with State policy. To determine appropriate value for carcinogens, see footnote c in the criteria matrix in paragraph (b)(1) of this section.

(12) **Alaska, EPA Region 10.**

- (i) All waters assigned to the following use classifications in the Alaska Administrative Code (AAC), Chapter 18 (i.e., identified in 18 AAC 70.020) are subject to the criteria in paragraph (d)(12)(ii) of this section, without exception:

70.020.(1) (A) Fresh Water

70.020.(1) (A) Water Supply

(i) Drinking, culinary, and food processing,

(iii) Aquaculture;

70.020.(1) (B) Water Recreation

(i) Contact recreation,

(ii) Secondary recreation;

70.020.(1) (C) Growth and propagation of fish, shellfish, other aquatic life, and wildlife

70.020.(2) (A) Marine Water

70.020.(2) (A) Water Supply

(i) Aquaculture,

70.020.(2) (B) Water Recreation

(i) contact recreation,

(ii) secondary recreation;

70.020.(2) (C) Growth and propagation of fish, shellfish, other aquatic life, and wildlife;

70.020.(2) (D) Harvesting for consumption of raw mollusks or other raw aquatic life.

(ii) The following criteria from the matrix in paragraph (b)(1) of this section apply to the use classifications identified in paragraph (d)(12)(i) of this section:

Use classification	Applicable criteria
(1)(A)(i)	Column D1—#s 16, 18-21, 23, 26, 27, 29, 30, 32, 37, 38, 42-44, 53, 55, 59-62, 64, 66, 68, 73, 74, 78, 82, 85, 88, 89, 91-93, 96, 98, 102-105, 107-111, 117-126.
(1)(A)(iii)	Column D2—#s 14, 16, 18-21, 22, 23, 26, 27, 29, 30, 32, 37, 38, 42-44, 46, 53, 54, 55, 59-62, 64, 66, 68, 73, 74, 78, 82, 85, 88-93, 95, 96, 98, 102-105, 107-111, 115-126.
(1)(B)(i), (1)(B)(ii), (1)(C)	Column D2—#s 14, 16, 18-21, 22, 23, 26, 27, 29, 30, 32, 37, 38, 42-44, 46, 53, 54, 55, 59-62, 64, 66, 68, 73, 74, 78, 82, 85, 88-93, 95, 96, 98, 102-105, 107-111,

Use classification	Applicable criteria
(2)(A)(i), (2)(B)(i), and (2)(B)ii, (2)(C), (2)(D)	115-126. Column D2—#s 14, 16, 18-21, 22, 23, 26, 27, 29, 30, 32, 37, 38, 42-44, 46, 53, 54, 55, 59-62, 64, 66, 68, 73, 74, 78, 82, 85, 88-93, 95, 96, 98, 102-105, 107-111, 115-126.

- (iii) The human health criteria shall be applied at the State-proposed risk level of 10^{-5} . To determine appropriate value for carcinogens, see footnote c in the criteria matrix in paragraph (b)(1) of this section.

(13) [Reserved]

[57 FR 60910, Dec. 22, 1992]

Editorial Note: For FEDERAL REGISTER citations affecting § 131.36, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.govinfo.gov.

§ 131.37 California.

- (a) **Additional criteria.** The following criteria are applicable to waters specified in the Water Quality Control Plan for Salinity for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, adopted by the California State Water Resources Control Board in State Board Resolution No. 91-34 on May 1, 1991:

(1) **Estuarine habitat criteria.**

(i) **General rule.**

- (A) Salinity (measured at the surface) shall not exceed 2640 micromhos/centimeter specific conductance at 25 °C (measured as a 14-day moving average) at the Confluence of the Sacramento and San Joaquin Rivers throughout the period each year from February 1 through June 30, and shall not exceed 2640 micromhos/centimeter specific conductance at 25 °C (measured as a 14-day moving average) at the specific locations noted in Table 1 near Roe Island and Chipps Island for the number of days each month in the February 1 to June 30 period computed by reference to the following formula:

$$\text{Number of days required in Month X} = \text{Total number of days in Month} \times (1 - 1/(1 + e^K))$$

where

$K = A + (B \times \text{natural logarithm of the previous month's 8-River Index});$

A and B are determined by reference to Table 1 for the Roe Island and Chipps Island locations;

x is the calendar month in the February 1 to June 30 period;

and e is the base of the natural (or Napierian) logarithm.

Where the number of days computed in this equation in paragraph (a)(1)(i)(A) of this section shall be rounded to the nearest whole number of days. When the previous month's 8-River Index is less than 500,000 acre-feet, the number of days required for the current month shall be zero.

TABLE 1. CONSTANTS APPLICABLE TO EACH OF THE MONTHLY EQUATIONS TO DETERMINE MONTHLY REQUIREMENTS DESCRIBED.

Month X	Chipps Island		Roe Island (if triggered)	
	A	B	A	B
Feb	⁻¹	⁻¹	-14.36	+ 2.068
Mar	-105.16	+ 15.943	-20.79	+ 2.741
Apr	-47.17	+ 6.441	-28.73	+ 3.783
May	-94.93	+ 13.662	-54.22	+ 6.571
June	-81.00	+ 9.961	-92.584	+ 10.699

¹ Coefficients for A and B are not provided at Chipps Island for February, because the 2640 micromhos/cm specific conductance criteria must be maintained at Chipps Island throughout February under all historical 8-River Index values for January.

(B) The Roe Island criteria apply at the salinity measuring station maintained by the U.S. Bureau of Reclamation at Port Chicago (km 64). The Chipps Island criteria apply at the Mallard Slough Monitoring Site, Station D-10 (RKI RSAC-075) maintained by the California Department of Water Resources. The Confluence criteria apply at the Collinsville Continuous Monitoring Station C-2 (RKI RSAC-081) maintained by the California Department of Water Resources.

(ii) **Exception.** The criteria at Roe Island shall be required for any given month only if the 14-day moving average salinity at Roe Island falls below 2640 micromhos/centimeter specific conductance on any of the last 14 days of the previous month.

(2) **Fish migration criteria –**

(i) **General rule –**

(A) **Sacramento River.** Measured Fish Migration criteria values for the Sacramento River shall be at least the following:

At temperatures less than below 61 °F: SRFMC = 1.35

At temperatures between 61 °F and 72 °F: SRFMC = 6.96-.092 * Fahrenheit temperature

At temperatures greater than 72 °F: SRFMC = 0.34

where SRFMC is the Sacramento River Fish Migration criteria value. Temperature shall be the water temperature at release of tagged salmon smolts into the Sacramento River at Miller Park.

- (B) **San Joaquin River.** Measured Fish Migration criteria values on the San Joaquin River shall be at least the following:

For years in which the SJVIndex is >2.5: $SJFMC = (-0.012) + 0.184 * SJVIndex$

In other years: $SJFMC = 0.205 + 0.0975 * SJVIndex$

where SJFMC is the San Joaquin River Fish Migration criteria value, and SJVIndex is the San Joaquin Valley Index in million acre feet (MAF)

- (ii) **Computing fish migration criteria values for Sacramento River.** In order to assess fish migration criteria values for the Sacramento River, tagged fall-run salmon smolts will be released into the Sacramento River at Miller Park and captured at Chipps Island, or alternatively released at Miller Park and Port Chicago and recovered from the ocean fishery, using the methodology described in this paragraph (a)(2)(ii). An alternative methodology for computing fish migration criteria values can be used so long as the revised methodology is calibrated with the methodology described in this paragraph (a)(2)(ii) so as to maintain the validity of the relative index values. Sufficient releases shall be made each year to provide a statistically reliable verification of compliance with the criteria. These criteria will be considered attained when the sum of the differences between the measured experimental value and the stated criteria value (i.e., measured value minus stated value) for each experimental release conducted over a three year period (the current year and the previous two years) shall be greater than or equal to zero. Fish for release are to be tagged at the hatchery with coded-wire tags, and fin clipped. Approximately 50,000 to 100,000 fish of smolt size (size greater than 75 mm) are released for each survival index estimate, depending on expected mortality. As a control for the ocean recovery survival index, one or two groups per season are released at Benecia or Pt. Chicago. From each upstream release of tagged fish, fish are to be caught over a period of one to two weeks at Chipps Island. Daylight sampling at Chipps Island with a 9.1 by 7.9 m, 3.2 mm cod end, midwater trawl is begun 2 to 3 days after release. When the first fish is caught, full-time trawling 7 days a week should begin. Each day's trawling consists of ten 20 minute tows generally made against the current, and distributed equally across the channel.

- (A) The Chipps Island smolt survival index is calculated as:

$$SSI = R \div MT(0.007692)$$

where

R = number of recaptures of tagged fish

M = number of marked (tagged) fish released

T = proportion of time sampled vs total time tagged fish were passing the site (i.e. time between first and last tagged fish recovery)

Where the value 0.007692 is the proportion of the channel width fished by the trawl, and is calculated as trawl width/channel width.

- (B) Recoveries of tagged fish from the ocean salmon fishery two to four years after release are also used to calculate a survival index for each release. Smolt survival indices from ocean recoveries are calculated as:

$$OSI = R_1/M_1 \div R_2/M_2$$

where

R_1 = number of tagged adults recovered from the upstream release

M_1 = number released upstream

R_2 = number of tagged adults recovered from the Port Chicago release

M_2 = number released at Port Chicago

- (1) The number of tagged adults recovered from the ocean fishery is provided by the Pacific States Marine Fisheries Commission, which maintains a port sampling program.

- (2) [Reserved]

- (iii) **Computing fish migration criteria values for San Joaquin River.** In order to assess annual fish migration criteria values for the San Joaquin River, tagged salmon smolts will be released into the San Joaquin River at Mossdale and captured at Chipps Island, or alternatively released at Mossdale and Port Chicago and recovered from the ocean fishery, using the methodology described in paragraph (a)(2)(iii). An alternative methodology for computing fish migration criteria values can be used so long as the revised methodology is calibrated with the methodology described below so as to maintain the validity of the relative index values. Sufficient releases shall be made each year to provide a statistically reliable estimate of the SJFMC for the year. These criteria will be considered attained when the sum of the differences between the measured experimental value and the stated criteria value (i.e., measured value minus stated value) for each experimental release conducted over a three year period (the current year and the previous two years) shall be greater than or equal to zero.

- (A) Fish for release are to be tagged at the hatchery with coded-wire tags, and fin clipped. Approximately 50,000 to 100,000 fish of smolt size (size greater than 75 mm) are released for each survival index estimate, depending on expected mortality. As a control for the ocean recovery survival index, one or two groups per season are released at Benicia or Pt. Chicago. From each upstream release of tagged fish, fish are to be caught over a period of one to two weeks at Chipps Island. Daylight sampling at Chipps Island with a 9.1 by 7.9 m, 3.2 mm cod end, midwater trawl is begun 2 to 3 days after release. When the first fish is caught, full-time trawling 7 days a week should begin. Each day's trawling consists of ten 20 minute tows generally made against the current, and distributed equally across the channel.

- (B) The Chipps Island smolt survival index is calculated as:

$$SSI = R \div MT(0.007692)$$

where

R = number of recaptures of tagged fish

M = number of marked (tagged) fish released

T = proportion of time sampled vs total time tagged fish were passing the site (i.e. time between first and last tagged fish recovery)

Where the value 0.007692 is the proportion of the channel width fished by the trawl, and is calculated as trawl width/channel width.

(C) Recoveries of tagged fish from the ocean salmon fishery two to four years after release are also used to calculate a survival index for each release. Smolt survival indices from ocean recoveries are calculated as:

$$OSI = R_1/M_1 \div R_2/M_2$$

where

R₁ = number of tagged adults recovered from the upstream release

M₁ = number released upstream

R₂ = number of tagged adults recovered from the Port Chicago release

M₂ = number released at Port Chicago

(1) The number of tagged adults recovered from the ocean fishery is provided by the Pacific States Marine Fisheries Commission, which maintains a port sampling program.

(2) [Reserved]

(3) ***Suisun marsh criteria.***

(i) Water quality conditions sufficient to support a natural gradient in species composition and wildlife habitat characteristic of a brackish marsh throughout all elevations of the tidal marshes bordering Suisun Bay shall be maintained. Water quality conditions shall be maintained so that none of the following occurs: Loss of diversity; conversion of brackish marsh to salt marsh; for animals, decreased population abundance of those species vulnerable to increased mortality and loss of habitat from increased water salinity; or for plants, significant reduction in stature or percent cover from increased water or soil salinity or other water quality parameters.

(ii) [Reserved]

(b) ***Revised criteria.*** The following criteria are applicable to state waters specified in Table 1-1, at Section (C)(3) ("Striped Bass—Salinity : 3. Prisoners Point—Spawning) of the Water Quality Control Plan for Salinity for the San Francisco Bay—Sacramento/San Joaquin Delta Estuary, adopted by the California State Water Resources Control Board in State Board Resolution No. 91-34 on May 1, 1991:

Location	Sampling site Nos (I--A/RKI)	Parameter	Description	Index type	San Joaquin Valley Index	Dates	Values
San Joaquin River at Jersey Point, San Andreas Landing, Prisoners Point, Buckley Cove, Rough and Ready Island, Brandt Bridge, Mossdale, and Vernalis	D15/ RSAN018, C4/ RSAN032, D29/ RSAN038, P8/ RSAN056, -/RSAN062, C6/ RSAN073, C7/ RSAN087, C10/ RSAN112	Specific Conductance @ 25 °C	14-day running average of mean daily for the period not more than value shown, in mmhos	Not Applicable	>2.5 MAF	April 1 to May 31	0.44 micro-mhos.
San Joaquin River at Jersey Point, San Andreas Landing and Prisoners Point	D15/ RSAN018, C4/ RSAN032, D29/ RSAN038	Specific Conductance	14-day running average of mean daily for the period not more than value shown, in mmhos	Not Applicable	≤2.5 MAF	April 1 to May 31	0.44 micro-mhos.

(c) **Definitions.** Terms used in paragraphs (a) and (b) of this section, shall be defined as follows:

- (1) **Water year.** A water year is the twelve calendar months beginning October 1.
- (2) **8-River Index.** The flow determinations are made and are published by the California Department of Water Resources in Bulletin 120. The 8-River Index shall be computed as the sum of flows at the following stations:
 - (i) Sacramento River at Band Bridge, near Red Bluff;
 - (ii) Feather River, total inflow to Oroville Reservoir;
 - (iii) Yuba River at Smartville;
 - (iv) American River, total inflow to Folsom Reservoir;
 - (v) Stanislaus River, total inflow to New Melones Reservoir;
 - (vi) Tuolumne River, total inflow to Don Pedro Reservoir;
 - (vii) Merced River, total inflow to Exchequer Reservoir; and
 - (viii) San Joaquin River, total inflow to Millerton Lake.
- (3) **San Joaquin Valley Index.**
 - (i) The San Joaquin Valley Index is computed according to the following formula:
$$I_{SJ} = 0.6X + 0.2Y \text{ and } 0.2Z$$
where
 I_{SJ} = San Joaquin Valley Index
 X = Current year's April-July San Joaquin Valley unimpaired runoff
 Y = Current year's October-March San Joaquin Valley unimpaired runoff
 Z = Previous year's index in MAF, not to exceed 0.9 MAF
 - (ii) **Measuring San Joaquin Valley unimpaired runoff.** San Joaquin Valley unimpaired runoff for the current water year is a forecast of the sum of the following locations: Stanislaus River, total flow to New Melones Reservoir; Tuolumne River, total inflow to Don Pedro Reservoir; Merced River, total flow to Exchequer Reservoir; San Joaquin River, total inflow to Millerton Lake.
- (4) **Salinity.** Salinity is the total concentration of dissolved ions in water. It shall be measured by specific conductance in accordance with the procedures set forth in 40 CFR 136.3, Table 1B, Parameter 64.

[60 FR 4707, Jan. 24, 1995]

§ 131.38 Establishment of numeric criteria for priority toxic pollutants for the State of California.

Link to an amendment published at 89 FR 101928, Dec. 17, 2024.

(a) **Scope.** This section promulgates criteria for priority toxic pollutants in the State of California for inland surface waters and enclosed bays and estuaries. This section also contains a compliance schedule provision.

(b)

(1) Criteria for Priority Toxic Pollutants in the State of California as described in the following table:

A		B Freshwater		C Saltwater		D Human health (10 ⁻⁶ risk for carcinogens) for consumption of:	
Number compound	CAS No.	Criterion maximum conc. ^d (µg/L) B1	Criterion continuous conc. ^d (µg/L) B2	Criterion maximum conc. ^d (µg/L) C1	Criterion continuous conc. ^d (µg/L) C2	Water and organisms (µg/L) D1	Organisms only (µg/L) D2
1. Antimony	7440360					as 14	at 4300
2. Arsenic ^b	7440382	imw 340	imw 150	im 69	im 36		
3. Beryllium	7440417					(ⁿ)	(ⁿ)
4. Cadmium ^b	7440439	eimwx 4.3	eimw 2.2	im 42	im 9.3	(ⁿ)	(ⁿ)
5a. Chromium (III)	16065831	eimo 550	eimo 180			(ⁿ)	(ⁿ)
5b. Chromium (VI) ^b	18540299	imw 16	imw 11	im 1100	im 50	(ⁿ)	(ⁿ)
6. Copper ^b	7440508	eimwx 13	eimw 9.0	im 4.8	im 3.1	1300	
7. Lead ^b	7439921	eimz 65	eimz 2.5	im 210	im 8.1	(ⁿ)	(ⁿ)
8. Mercury ^b	7439976	[Reserved]	[Reserved]	[Reserved]	[Reserved]	a 0.050	a 0.051
9. Nickel ^b	7440020	eimw 470	eimw 52	im 74	im 8.2	a 610	a 4600
10. Selenium ^b	7782492	p [Reserved]	q 5.0	im 290	im 71	(ⁿ)	(ⁿ)
11. Silver ^b	7440224	eim 3.4		im 1.9			
12. Thallium	7440280					as 1.7	at 6.3
13. Zinc ^b	7440666	eimwx 120	eimw 120	im 90	im 81		
14. Cyanide ^b	57125	o 22	o 5.2	r thnsp;1	r 1	a 700	aj 220,000
15. Asbestos	1332214					ks 7,000,000 fibers/l	
16. 2,3,7,8-TCDD (Dioxin)	1746016					c> 0.000000013	c> 0.000000014
17. Acrolein	107028					s> 320	t> 780
18. Acrylonitrile	107131					acs 0.059	act 0.66
19. Benzene	71432					ac 1.2	ac 71
20. Bromoform	75252					ac 4.3	ac 360
21. Carbon Tetrachloride	56235					acs 0.25	act 4.4
22. Chlorobenzene	108907					as 680	ajt 21,000
23. Chlorodibromomethane	124481					acy 0.41	ac 34
24. Chloroethane	75003						
25. 2-Chloroethylvinyl Ether	110758						
26. Chloroform	67663					[Reserved]	[Reserved]
27. Dichlorobromomethane	75274					acy 0.56	ac 46
28. 1,1-Dichloroethane	75343						

29. 1,2-Dichloroethane	107062					acs 0.38	act 99
30. 1,1-Dichloroethylene	75354					acs 0.057	act 3.2
31. 1,2-Dichloropropane	78875					a 0.52	a 39
32. 1,3-Dichloropropylene	542756					as 10	at 1,700
33. Ethylbenzene	100414					as 3,100	at 29,000
34. Methyl Bromide	74839					a 48	a 4,000
35. Methyl Chloride	74873					(n)	(n)
36. Methylene Chloride	75092					ac 4.7	ac 1,600
37. 1,1,2,2-Tetrachloroethane	79345					acs 0.17	act 11
38. Tetrachloroethylene	127184					cs 0.8	ct 8.85
39. Toluene	108883					a 6,800	a 200,000
40. 1,2-Trans-Dichloroethylene	156605					a 700	a 140,000
41. 1,1,1-Trichloroethane	71556					(n)	(n)
42. 1,1,2-Trichloroethane	79005					acs 0.60	act 42
43. Trichloroethylene	79016					cs 2.7	ct 81
44. Vinyl Chloride	75014					cs 2	ct 525
45. 2-Chlorophenol	95578					a 120	a 400
46. 2,4-Dichlorophenol	120832					as 93	at 790
47. 2,4-Dimethylphenol	105679					a 540	a 2,300
48. 2-Methyl-4,6-Dinitrophenol	534521					s> 13.4	t> 765
49. 2,4-Dinitrophenol	51285					as 70	at 14,000
50. 2-Nitrophenol	88755						
51. 4-Nitrophenol	100027						
52. 3-Methyl-4-Chlorophenol	59507						
53. Pentachlorophenol	87865	fw 19	fw 15	13	7.9	ac 0.28	acj 8.2
54. Phenol	108952					a 21,000	ajt 4,600,000
55. 2,4,6-Trichlorophenol	88062					ac 2.1	ac 6.5
56. Acenaphthene	83329					a 1,200	a 2,700
57. Acenaphthylene	208968						
58. Anthracene	120127					a 9,600	a 110,000
59. Benzidine	92875					acs 0.00012	act 0.00054
60. Benzo(a)Anthracene	56553					ac 0.0044	ac 0.049
61. Benzo(a)Pyrene	50328					ac 0.0044	ac 0.049
62. Benzo(b)Fluoranthene	205992					ac 0.0044	ac 0.049
63. Benzo(ghi)Perylene	191242						
64. Benzo(k)Fluoranthene	207089					ac 0.0044	ac 0.049
65. Bis(2-Chloroethoxy)Methane	111911						

66. Bis(2-Chloroethyl)Ether	111444					acs 0.031	act 1.4
67. Bis(2-Chloroisopropyl)Ether	108601					a 1,400	at 170,000
68. Bis(2-Ethylhexyl)Phthalate	117817					acs 1.8	act 5.9
69. 4-Bromophenyl Phenyl Ether	101553						
70. Butylbenzyl Phthalate	85687					a 3,000	a 5,200
71. 2-Chloronaphthalene	91587					a 1,700	a 4,300
72. 4-Chlorophenyl Phenyl Ether	7005723						
73. Chrysene	218019					ac 0.0044	ac 0.049
74. Dibenzo(a,h)Anthracene	53703					ac 0.0044	ac 0.049
75. 1,2 Dichlorobenzene	95501					a 2,700	a 17,000
76. 1,3 Dichlorobenzene	541731					400	2,600
77. 1,4 Dichlorobenzene	106467					400	2,600
78. 3,3'-Dichlorobenzidine	91941					acs 0.04	act 0.077
79. Diethyl Phthalate	84662					as 23,000	at 120,000
80. Dimethyl Phthalate	131113					s> 313,000	t> 2,900,000
81. Di-n-Butyl Phthalate	84742					as 2,700	at 12,000
82. 2,4-Dinitrotoluene	121142					cs 0.11	ct 9.1
83. 2,6-Dinitrotoluene	606202						
84. Di-n-Octyl Phthalate	117840						
85. 1,2-Diphenylhydrazine	122667					acs 0.040	act 0.54
86. Fluoranthene	206440					a 300	a 370
87. Fluorene	86737					a 1,300	a 14,000
88. Hexachlorobenzene	118741					ac 0.00075	ac 0.00077
89. Hexachlorobutadiene	87683					acs 0.44	act 50
90. Hexachlorocyclopentadiene	77474					as 240	ajt 17,000
91. Hexachloroethane	67721					acs 1.9	act 8.9
92. Indeno(1,2,3-cd) Pyrene	193395					ac 0.0044	ac 0.049
93. Isophorone	78591					cs 8.4	ct 600
94. Naphthalene	91203						
95. Nitrobenzene	98953					as 17	ajt 1,900
96. N-Nitrosodimethylamine	62759					acs 0.00069	act 8.1
97. N-Nitrosodi-n-Propylamine	621647					a 0.005	a 1.4
98. N-Nitrosodiphenylamine	86306					acs 5.0	act 16
99. Phenanthrene	85018						
100. Pyrene	129000					a 960	a 11,000
101. 1,2,4-Trichlorobenzene	120821						
102. Aldrin	309002	g> 3		g> 1.3		ac 0.00013	ac 0.00014

103. alpha-BHC	319846					a ^c 0.0039	a ^c 0.013
104. beta-BHC	319857					a ^c 0.014	a ^c 0.046
105. gamma-BHC	58899	w> 0.95		g> 0.16		c> 0.019	c> 0.063
106. delta-BHC	319868						
107. Chlordane	57749	g> 2.4	g> 0.0043	g> 0.09	g> 0.004	a ^c 0.00057	a ^c 0.00059
108. 4,4'-DDT	50293	g> 1.1	g> 0.001	g> 0.13	g> 0.001	a ^c 0.00059	a ^c 0.00059
109. 4,4'-DDE	72559					a ^c 0.00059	a ^c 0.00059
110. 4,4'-DDD	72548					a ^c 0.00083	a ^c 0.00084
111. Dieldrin	60571	w> 0.24	w> 0.056	g> 0.71	g> 0.0019	a ^c 0.00014	a ^c 0.00014
112. alpha-Endosulfan	959988	g> 0.22	g> 0.056	g> 0.034	g> 0.0087	a ^a 110	a ^a 240
113. beta-Endosulfan	33213659	g> 0.22	g> 0.056	g> 0.034	g> 0.0087	a ^a 110	a ^a 240
114. Endosulfan Sulfate	1031078					a ^a 110	a ^a 240
115. Endrin	72208	w> 0.086	w> 0.036	g> 0.037	g> 0.0023	a ^a 0.76	a ^j 0.81
116. Endrin Aldehyde	7421934					a ^a 0.76	a ^j 0.81
117. Heptachlor	76448	g> 0.52	g> 0.0038	g> 0.053	g> 0.0036	a ^c 0.00021	a ^c 0.00021
118. Heptachlor Epoxide	1024573	g> 0.52	g> 0.0038	g> 0.053	g> 0.0036	a ^c 0.00010	a ^c 0.00011
119-125. Polychlorinated biphenyls (PCBs)			ur> 0.014		ur> 0.03	c ^v 0.00017	c ^v 0.00017
126. Toxaphene	8001352	0.73	0.0002	0.21	0.0002	a ^c 0.00073	a ^c 0.00075
Total Number of Criteria ^{hr} >		22	21	22	20	92	90

FOOTNOTES TO TABLE IN PARAGRAPH (B)(1):

^a Criteria revised to reflect the Agency q1* or RfD, as contained in the Integrated Risk Information System (IRIS) as of October 1, 1996. The fish tissue bioconcentration factor (BCF) from the 1980 documents was retained in each case.

^b Criteria apply to California waters except for those waters subject to objectives in Tables III-2A and III-2B of the San Francisco Regional Water Quality Control Board's (SFRWQCB) 1986 Basin Plan that were adopted by the SFRWQCB and the State Water Resources Control Board, approved by the EPA, and which continue to apply. For copper and nickel, criteria apply to California waters except for waters south of Dumbarton Bridge in San Francisco Bay that are subject to the objectives in the SFRWQCB's Basin Plan as amended by SFRWQCB Resolution R2-2002-0061, dated May 22, 2002, and approved by the State Water Resources Control Board. The EPA approved the aquatic life site-specific objectives on January 21, 2003. The copper and nickel aquatic life site-specific objectives contained in the amended Basin Plan apply instead.

^c Criteria are based on carcinogenicity of 10 (-6) risk.

^d Criteria Maximum Concentration (CMC) equals the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects. Criteria Continuous Concentration (CCC) equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. µg/L equals micrograms per liter.

^e Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. The equations are provided in matrix at paragraph (b)(2) of this section. Values displayed above in the matrix correspond to a total hardness of 100 mg/l.

^f Freshwater aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows: Values displayed above in the matrix correspond to a pH of 7.8. CMC = exp(1.005(pH)-4.869). CCC = exp(1.005(pH)-5.134).

^g This criterion is based on Clean Water Act (CWA) 304(a) aquatic life criterion issued in 1980, and was issued in one of the following documents: Aldrin/Dieldrin (EPA 440/5-80-019), Chlordane (EPA 440/5-80-027), DDT (EPA 440/5-80-038), Endosulfan (EPA 440/5-80-046), Endrin (EPA 440/5-80-047), Heptachlor (440/5-80-052), Hexachlorocyclohexane (EPA 440/5-80-054), Silver (EPA 440/5-80-071). The Minimum Data Requirements and derivation procedures were different in the 1980 Guidelines than in the 1985 Guidelines. For example, a "CMC"

derived using the 1980 Guidelines was derived to be used as an instantaneous maximum. If assessment is to be done using an averaging period, the values given should be divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

^h These totals simply sum the criteria in each column. For aquatic life, there are 23 priority toxic pollutants with some type of freshwater or saltwater, acute or chronic criteria. For human health, there are 92 priority toxic pollutants with either "water + organism" or "organism only" criteria. Note that these totals count chromium as one pollutant even though the EPA has developed criteria based on two valence states. In the matrix, the EPA has assigned numbers 5a and 5b to the criteria for chromium to reflect the fact that the list of 126 priority pollutants includes only a single listing for chromium.

ⁱ Criteria for these metals are expressed as a function of the water-effect ratio, WER, as defined in paragraph (c) of this section. CMC = column B1 or C1 value × WER; CCC = column B2 or C2 value × WER.

^j No criterion for protection of human health from consumption of aquatic organisms (excluding water) was presented in the 1980 criteria document or in the 1986 Quality Criteria for Water. Nevertheless, sufficient information was presented in the 1980 document to allow a calculation of a criterion, even though the results of such a calculation were not shown in the document.

^k The CWA 304(a) criterion for asbestos is the MCL.

^l [Reserved].

^m These freshwater and saltwater criteria for metals are expressed in terms of the dissolved fraction of the metal in the water column. Criterion values were calculated by using the EPA's Clean Water Act 304(a) guidance values (described in the total recoverable fraction) and then applying the conversion factors in § 131.36(b)(1) and (2).

ⁿ The EPA is not promulgating human health criteria for these contaminants. However, permit authorities should address these contaminants in NPDES permit actions using the State's existing narrative criteria for toxics.

^o These criteria were promulgated for specific waters in California in the National Toxics Rule ("NTR"), at § 131.36. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries and waters of the State defined as inland, i.e., all surface waters of the State not ocean waters. These waters specifically include the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. This section does not apply instead of the NTR for this criterion.

^p A criterion of 20 µg/l was promulgated for specific waters in California in the NTR and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to the mouth of the Merced River. This section does not apply instead of the NTR for this criterion. The State of California adopted and the EPA approved a site specific criterion for the San Joaquin River, mouth of Merced to Vernalis; therefore, this section does not apply to these waters.

^q This criterion is expressed in the total recoverable form. This criterion was promulgated for specific waters in California in the NTR and was promulgated in the total recoverable form. The specific waters to which the NTR criterion applies include: Waters of the San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of Salt Slough, Mud Slough (north) and the San Joaquin River, Sack Dam to Vernalis. This criterion does not apply instead of the NTR for these waters. This criterion applies to additional waters of the United States in the State of California pursuant to paragraph (c) of this section. The State of California adopted and the EPA approved a site-specific criterion for the Grassland Water District, San Luis National Wildlife Refuge, and the Los Banos State Wildlife Refuge; therefore, this criterion does not apply to these waters.

^r These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays or estuaries including the Sacramento-San Joaquin Delta within California Regional Water Board 5, but excluding the San Francisco Bay. This section does not apply instead of the NTR for these criteria.

^s These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the Sacramento-San Joaquin Delta and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) that include a MUN use designation. This section does not apply instead of the NTR for these criteria.

^t These criteria were promulgated for specific waters in California in the NTR. The specific waters to which the NTR criteria apply include: Waters of the State defined as bays and estuaries including San Francisco Bay upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta; and waters of the State defined as inland (i.e., all surface waters of the State not bays or estuaries or ocean) without a MUN use designation. This section does not apply instead of the NTR for these criteria.

^u PCBs are a class of chemicals which include aroclors 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469219, 11097691, 11104282, 11141165, 12672296, 11096825, and 12674112, respectively. The aquatic life criteria apply to the sum of this set of seven aroclors.

^v This criterion applies to total PCBs, e.g., the sum of all congener or isomer or homolog or aroclor analyses.

^w This criterion has been recalculated pursuant to the 1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA-820-B-96-001, September 1996. See also Great Lakes Water Quality Initiative Criteria Documents for the Protection of Aquatic Life in Ambient Water, Office of Water, EPA-80-B-95-004, March 1995.

^x The State of California has adopted and the EPA has approved site specific criteria for the Sacramento River (and tributaries) above Hamilton City; therefore, these criteria do not apply to these waters.

^y The State of California adopted and the EPA approved a site-specific criterion for New Alamo Creek from Old Alamo Creek to Ulati Creek and for Ulati Creek from Alamo Creek to Cache Slough; therefore, this criterion does not apply to these waters.

^z The State of California adopted and the EPA approved a site-specific criterion for the Los Angeles River and its tributaries; therefore, this criterion does not apply to these waters.

GENERAL NOTES TO TABLE IN PARAGRAPH (b)(1)

1. The table in this paragraph (b)(1) lists all of the EPA's priority toxic pollutants whether or not criteria guidance are available. Blank spaces indicate the absence of national section 304(a) criteria guidance. Because of variations in chemical nomenclature systems, this listing of toxic pollutants does not duplicate the listing in appendix A to 40 CFR part 423—126 Priority Pollutants. The EPA has added the Chemical Abstracts Service (CAS) registry numbers, which provide a unique identification for each chemical.

2. The following chemicals have organoleptic-based criteria recommendations that are not included on this chart: zinc, 3-methyl-4-chlorophenol.

3. Freshwater and saltwater aquatic life criteria apply as specified in paragraph (c)(3) of this section.

- (2) Factors for Calculating Metals Criteria. Final CMC and CCC values should be rounded to two significant figures.

(i) $CMC = WER \times (Acute\ Conversion\ Factor) \times (\exp\{m_A[\ln(hardness)] + b_A\})$

(ii) $CCC = WER \times (Chronic\ Conversion\ Factor) \times (\exp\{m_C[\ln(hardness)] + b_C\})$

(iii) Table 1 to paragraph (b)(2) of this section:

Metal	m_A	b_A	m_C	b_C
Cadmium	1.128	-3.6867	0.7852	-2.715
Copper	0.9422	-1.700	0.8545	-1.702
Chromium (III)	0.8190	3.688	0.8190	1.561
Lead	1.273	-1.460	1.273	-4.705
Nickel	0.8460	2.255	0.8460	0.0584
Silver	1.72	-6.52		
Zinc	0.8473	0.884	0.8473	0.884

Note to Table 1: The term "exp" represents the base e exponential function.

(iv) Table 2 to paragraph (b)(2) of this section:

Metal	Conversion factor (CF) for freshwater acute criteria	CF for freshwater chronic criteria	CF for saltwater acute criteria	CF ^a for saltwater chronic criteria
Antimony	(^d)	(^d)	(^d)	(^d)
Arsenic	1.000	1.000	1.000	1.000
Beryllium	(^d)	(^d)	(^d)	(^d)
Cadmium	^b 0.944	^b 0.909	0.994	0.994
Chromium (III)	0.316	0.860	(^d)	(^d)
Chromium (VI)	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	^b 0.791	^b 0.791	0.951	0.951

Footnotes to table 2 of paragraph (b)(2):

^a Conversion Factors for chronic marine criteria are not currently available. Conversion Factors for acute marine criteria have been used for both acute and chronic marine criteria.

^b Conversion Factors for these pollutants in freshwater are hardness dependent. CFs are based on a hardness of 100 mg/l as calcium carbonate (CaCO₃). Other hardness can be used; CFs should be recalculated using the equations in table 3 to paragraph (b)(2) of this section.

^c Bioaccumulative compound and inappropriate to adjust to percent dissolved.

^d EPA has not published an aquatic life criterion value.

Metal	Conversion factor (CF) for freshwater acute criteria	CF for freshwater chronic criteria	CF for saltwater acute criteria	CF ^a for saltwater chronic criteria
Mercury				
Nickel	0.998	0.997	0.990	0.990
Selenium		(^c)	0.998	0.998
Silver	0.85	(^d)	0.85	(^d)
Thallium	(^d)	(^d)	(^d)	(^d)
Zinc	0.978	0.986	0.946	0.946

Footnotes to table 2 of paragraph (b)(2):

^a Conversion Factors for chronic marine criteria are not currently available. Conversion Factors for acute marine criteria have been used for both acute and chronic marine criteria.

^b Conversion Factors for these pollutants in freshwater are hardness dependent. CFs are based on a hardness of 100 mg/l as calcium carbonate (CaCO₃). Other hardness can be used; CFs should be recalculated using the equations in table 3 to paragraph (b)(2) of this section.

^c Bioaccumulative compound and inappropriate to adjust to percent dissolved.

^d EPA has not published an aquatic life criterion value.

Note to table 2 of paragraph (b)(2): The term "Conversion Factor" represents the recommended conversion factor for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column. See "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria", October 1, 1993, by Martha G. Prothro, Acting Assistant Administrator for Water available from Water Resource Center, USEPA, Mailcode RC4100, M Street SW, Washington, DC 20460 and the note to § 131.36(b)(1).

(v) Table 3 to paragraph (b)(2) of this section:

	Acute	Chronic
Cadmium	CF = 1.136672—[(ln {hardness})(0.041838)]	CF = 1.101672—[(ln {hardness})(0.041838)]
Lead	CF = 1.46203—[(ln {hardness})(0.145712)]	CF = 1.46203—[(ln {hardness})(0.145712)]

(c) **Applicability.**

- (1) The criteria in paragraph (b) of this section apply to the State's designated uses cited in paragraph (d) of this section and apply concurrently with any criteria adopted by the State, except when State regulations contain criteria which are more stringent for a particular parameter and use, or except as provided in footnotes p, q, and x to the table in paragraph (b)(1) of this section.

- (2) The criteria established in this section are subject to the State's general rules of applicability in the same way and to the same extent as are other Federally-adopted and State-adopted numeric toxics criteria when applied to the same use classifications including mixing zones, and low flow values below which numeric standards can be exceeded in flowing fresh waters.
- (i) For all waters with mixing zone regulations or implementation procedures, the criteria apply at the appropriate locations within or at the boundary of the mixing zones; otherwise the criteria apply throughout the water body including at the point of discharge into the water body.
- (ii) The State shall not use a low flow value below which numeric standards can be exceeded that is less stringent than the flows in Table 4 to paragraph (c)(2) of this section for streams and rivers.
- (iii) Table 4 to paragraph (c)(2) of this section:

Criteria	Design flow
Aquatic Life Acute Criteria (CMC)	1 Q 10 or 1 B 3
Aquatic Life Chronic Criteria (CCC)	7 Q 10 or 4 B 3
Human Health Criteria	Harmonic Mean Flow

Note to table 4 of paragraph (c)(2): 1. CMC (Criteria Maximum Concentration) is the water quality criteria to protect against acute effects in aquatic life and is the highest instream concentration of a priority toxic pollutant consisting of a short-term average not to be exceeded more than once every three years on the average.

2. CCC (Continuous Criteria Concentration) is the water quality criteria to protect against chronic effects in aquatic life and is the highest in stream concentration of a priority toxic pollutant consisting of a 4-day average not to be exceeded more than once every three years on the average.

3. 1 Q 10 is the lowest one day flow with an average recurrence frequency of once in 10 years determined hydrologically.

4. 1 B 3 is biologically based and indicates an allowable exceedence of once every 3 years. It is determined by EPA's computerized method (DFLOW model).

5. 7 Q 10 is the lowest average 7 consecutive day low flow with an average recurrence frequency of once in 10 years determined hydrologically.

6. 4 B 3 is biologically based and indicates an allowable exceedence for 4 consecutive days once every 3 years. It is determined by EPA's computerized method (DFLOW model).

- (iv) If the State does not have such a low flow value below which numeric standards do not apply, then the criteria included in paragraph (d) of this section apply at all flows.
 - (v) If the CMC short-term averaging period, the CCC four-day averaging period, or once in three-year frequency is inappropriate for a criterion or the site to which a criterion applies, the State may apply to EPA for approval of an alternative averaging period, frequency, and related design flow. The State must submit to EPA the bases for any alternative averaging period, frequency, and related design flow. Before approving any change, EPA will publish for public comment, a document proposing the change.
- (3) The freshwater and saltwater aquatic life criteria in the matrix in paragraph (b)(1) of this section apply as follows:
- (i) For waters in which the salinity is equal to or less than 1 part per thousand 95% or more of the time, the applicable criteria are the freshwater criteria in Column B;
 - (ii) For waters in which the salinity is equal to or greater than 10 parts per thousand 95% or more of the time, the applicable criteria are the saltwater criteria in Column C except for selenium in the San Francisco Bay estuary where the applicable criteria are the freshwater criteria in Column B (refer to footnotes p and q to the table in paragraph (b)(1) of this section); and
 - (iii) For waters in which the salinity is between 1 and 10 parts per thousand as defined in paragraphs (c)(3)(i) and (ii) of this section, the applicable criteria are the more stringent of the freshwater or saltwater criteria. However, the Regional Administrator may approve the use of the alternative freshwater or saltwater criteria if scientifically defensible information and data demonstrate that on a site-specific basis the biology of the water body is dominated by freshwater aquatic life and that freshwater criteria are more appropriate; or conversely, the biology of the water body is dominated by saltwater aquatic life and that saltwater criteria are more appropriate. Before approving any change, EPA will publish for public comment a document proposing the change.
- (4) *Application of metals criteria.*
- (i) For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/l or less as calcium carbonate, the actual ambient hardness of the surface water shall be used in those equations. For waters with a hardness of over 400 mg/l as calcium carbonate, a hardness of 400 mg/l as calcium carbonate shall be used with a default Water-Effect Ratio (WER) of 1, or the actual hardness of the ambient surface water shall be used with a WER. The same provisions apply for calculating the metals criteria for the comparisons provided for in paragraph (c)(3)(iii) of this section.
 - (ii) The hardness values used shall be consistent with the design discharge conditions established in paragraph (c)(2) of this section for design flows and mixing zones.
 - (iii) The criteria for metals (compounds #1—#13 in the table in paragraph (b)(1) of this section) are expressed as dissolved except where otherwise noted. For purposes of calculating aquatic life criteria for metals from the equations in footnote i to the table in paragraph (b)(1) of this section and the equations in paragraph (b)(2) of this section, the water effect ratio is generally computed as a specific pollutant's acute or chronic toxicity value measured in water from the site covered by the standard, divided by the respective acute or chronic toxicity value in laboratory dilution water. To use a water effect ratio other than the default of 1, the WER must

be determined as set forth in Interim Guidance on Determination and Use of Water Effect Ratios, U.S. EPA Office of Water, EPA-823-B-94-001, February 1994, or alternatively, other scientifically defensible methods adopted by the State as part of its water quality standards program and approved by EPA. For calculation of criteria using site-specific values for both the hardness and the water effect ratio, the hardness used in the equations in paragraph (b)(2) of this section must be determined as required in paragraph (c)(4)(ii) of this section. Water hardness must be calculated from the measured calcium and magnesium ions present, and the ratio of calcium to magnesium should be approximately the same in standard laboratory toxicity testing water as in the site water.

(d)

- (1) Except as specified in paragraph (d)(3) of this section, all waters assigned any aquatic life or human health use classifications in the Water Quality Control Plans for the various Basins of the State ("Basin Plans") adopted by the California State Water Resources Control Board ("SWRCB"), except for ocean waters covered by the Water Quality Control Plan for Ocean Waters of California ("Ocean Plan") adopted by the SWRCB with resolution Number 90-27 on March 22, 1990, are subject to the criteria in paragraph (d)(2) of this section, without exception. These criteria apply to waters identified in the Basin Plans. More particularly, these criteria apply to waters identified in the Basin Plan chapters designating beneficial uses for waters within the region. Although the State has adopted several use designations for each of these waters, for purposes of this action, the specific standards to be applied in paragraph (d)(2) of this section are based on the presence in all waters of some aquatic life designation and the presence or absence of the MUN use designation (municipal and domestic supply). (See Basin Plans for more detailed use definitions.)
- (2) The criteria from the table in paragraph (b)(1) of this section apply to the water and use classifications defined in paragraph (d)(1) of this section as follows:

Water and use classification	Applicable criteria
(i) All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that include a MUN use designation	(A) Columns B1 and B2—all pollutants (B) Columns C1 and C2—all pollutants (C) Column D1—all pollutants
(ii) All inland waters of the United States or enclosed bays and estuaries that are waters of the United States that do not include a MUN use designation	(A) Columns B1 and B2—all pollutants (B) Columns C1 and C2—all pollutants (C) Column D2—all

Water and use classification	Applicable criteria
	pollutants

- (3) Nothing in this section is intended to apply instead of specific criteria, including specific criteria for the San Francisco Bay estuary, promulgated for California in the National Toxics Rule at § 131.36.
- (4) The human health criteria shall be applied at the State-adopted 10 (-6) risk level.
- (5) Nothing in this section applies to waters located in Indian Country.

(e) ***Schedules of compliance.***

- (1) It is presumed that new and existing point source dischargers will promptly comply with any new or more restrictive water quality-based effluent limitations ("WQBELs") based on the water quality criteria set forth in this section.
- (2) When a permit issued on or after May 18, 2000 to a new discharger contains a WQBEL based on water quality criteria set forth in paragraph (b) of this section, the permittee shall comply with such WQBEL upon the commencement of the discharge. A new discharger is defined as any building, structure, facility, or installation from which there is or may be a "discharge of pollutants" (as defined in 40 CFR 122.2) to the State of California's inland surface waters or enclosed bays and estuaries, the construction of which commences after May 18, 2000.
- (3) Where an existing discharger reasonably believes that it will be infeasible to promptly comply with a new or more restrictive WQBEL based on the water quality criteria set forth in this section, the discharger may request approval from the permit issuing authority for a schedule of compliance.
- (4) A compliance schedule shall require compliance with WQBELs based on water quality criteria set forth in paragraph (b) of this section as soon as possible, taking into account the dischargers' technical ability to achieve compliance with such WQBEL.
- (5) If the schedule of compliance exceeds one year from the date of permit issuance, reissuance or modification, the schedule shall set forth interim requirements and dates for their achievement. The dates of completion between each requirement may not exceed one year. If the time necessary for completion of any requirement is more than one year and is not readily divisible into stages for completion, the permit shall require, at a minimum, specified dates for annual submission of progress reports on the status of interim requirements.
- (6) In no event shall the permit issuing authority approve a schedule of compliance for a point source discharge which exceeds five years from the date of permit issuance, reissuance, or modification, whichever is sooner. Where shorter schedules of compliance are prescribed or schedules of compliance are prohibited by law, those provisions shall govern.
- (7) If a schedule of compliance exceeds the term of a permit, interim permit limits effective during the permit shall be included in the permit and addressed in the permit's fact sheet or statement of basis. The administrative record for the permit shall reflect final permit limits and final compliance dates. Final compliance dates for final permit limits, which do not occur during the term of the permit, must

occur within five years from the date of issuance, reissuance or modification of the permit which initiates the compliance schedule. Where shorter schedules of compliance are prescribed or schedules of compliance are prohibited by law, those provisions shall govern.

(8) The provisions in this paragraph (e), Schedules of compliance, shall expire on May 18, 2005.

[65 FR 31711, May 18, 2000, as amended at 66 FR 9961, Feb. 13, 2001; 68 FR 62747, Nov. 6, 2003; 78 FR 20255, Apr. 4, 2013; 83 FR 52166, Oct. 16, 2018]

§ 131.40 Puerto Rico

(a) **Use designations for marine waters.** In addition to the Commonwealth's adopted use designations, the following waterbodies in Puerto Rico have the beneficial use designated in this paragraph (a) within the bays specified below, and within the Commonwealth's territorial seas, as defined in section 502(8) of the Clean Water Act, and 33 CFR 2.05-5, except such waters classified by the Commonwealth as SB.

Waterbody segment	From	To	Designated use
Coastal Waters	500m offshore	3 miles offshore	Primary Contact Recreation.
Guayanilla & Tallaboa Bays	Cayo Parguera	Punta Verraco	Primary Contact Recreation.
Mayaguez Bay	Punta Guanajibo	Punta Algarrobo	Primary Contact Recreation.
Ponce Port	Punta Carenero	Punta Cuchara	Primary Contact Recreation.
San Juan Port	mouth of Río Bayamón	Punta El Morro	Primary Contact Recreation.
Yabucoa Port	Punta Icacos	Punta Yeguas	Primary Contact Recreation.

(b) **Criteria that apply to Puerto Rico's marine waters.** In addition to all other Commonwealth criteria, the following criteria for bacteria apply to the waterbodies in paragraph (a) of this section:

Bacteria: The fecal coliform geometric mean of a series of representative samples (at least five samples) of the waters taken sequentially shall not exceed 200 colonies/100 ml, and not more than 20 percent of the samples shall exceed 400 colonies/100 ml. The enterococci density in terms of geometric mean of at least five representative samples taken sequentially shall not exceed 35/100 ml. No single sample should exceed the upper confidence limit of 75% using 0.7 as the log standard deviation until sufficient site data exist to establish a site-specific log standard deviation.

(c) **Water quality standard variances.** The Regional Administrator, EPA Region 2, is authorized to grant variances from the water quality standards in paragraphs (a) and (b) of this section where the requirements of § 131.14 are met.

[69 FR 3524, Jan. 26, 2004, as amended at 80 FR 51050, Aug. 21, 2015]

§ 131.41 Bacteriological criteria for those states not complying with Clean Water Act section 303(i)(1)(A).

- (a) **Scope.** This section is a promulgation of the Clean Water Act section 304(a) criteria for bacteria for coastal recreation waters in specific States. It is not a general promulgation of the Clean Water Act section 304(a) criteria for bacteria. This section also contains a compliance schedule provision.
- (b) **Definitions.**
 - (1) **Coastal Recreation Waters** are the Great Lakes and marine coastal waters (including coastal estuaries) that are designated under section 303(c) of the Clean Water Act for use for swimming, bathing, surfing, or similar water contact activities. Coastal recreation waters do not include inland waters or waters upstream from the mouth of a river or stream having an unimpaired natural connection with the open sea.
 - (2) **Designated bathing beach waters** are those coastal recreation waters that, during the recreation season, are heavily-used (based upon an evaluation of use within the State) and may have: a lifeguard, bathhouse facilities, or public parking for beach access. States may include any other waters in this category even if the waters do not meet these criteria.
 - (3) **Moderate use coastal recreation waters** are those coastal recreation waters that are not designated bathing beach waters but typically, during the recreation season, are used by at least half of the number of people as at typical designated bathing beach waters within the State. States may also include light use or infrequent use coastal recreation waters in this category.
 - (4) **Light use coastal recreation waters** are those coastal recreation waters that are not designated bathing beach waters but typically, during the recreation season, are used by less than half of the number of people as at typical designated bathing beach waters within the State, but are more than infrequently used. States may also include infrequent use coastal recreation waters in this category.
 - (5) **Infrequent use coastal recreation waters** are those coastal recreation waters that are rarely or occasionally used.
 - (6) **New pathogen discharger** for the purposes of this section means any building, structure, facility, or installation from which there is or may be a discharge of pathogens, the construction of which commenced on or after December 16, 2004. It does not include relocation of existing combined sewer overflow outfalls.
 - (7) **Existing pathogen discharger** for the purposes of this section means any discharger that is not a new pathogen discharger.
- (c) **EPA's section 304(a) ambient water quality criteria for bacteria.**

(1) Freshwaters:

A Indicator ^d	B Geometric mean	C Single sample maximum (per 100 ml)			
		C1 Designated bathing beach (75% confidence level)	C2 Moderate use costal recreation waters (82% confidence level)	C3 Light use coastal recreation waters (90% confidence level)	C4 Infrequent use coastal recreation waters (95% confidence level)
<i>E. coli</i> ^e	126/100 mil ^a	^b 235	^b 298	^b 409	^b 575
Enterococci ^e	33/100	^b 61	^b 78	^b 107	^b 151

Footnotes to table in paragraph (c)(1):

a. This value is for use with analytical methods 1103.1, 1603, or 1604 or any equivalent method that measures viable bacteria.

b. Calculated using the following: single sample maximum = geometric mean * 10 + (confidence level factor * log standard deviation), where the confidence level factor is: 75%: 0.68; 82%: 0.94; 90%: 1.28; 95%: 1.65. The log standard deviation from EPA's epidemiological studies is 0.4.

c. This value is for use with analytical methods 1106.1 or 1600 or any equivalent method that measures viable bacteria.

d. The State may determine which of these indicators applies to its freshwater coastal recreation waters. Until a State makes that determination, *E. coli* will be the applicable indicator.

e. These values apply to *E. coli* or enterococci regardless of origin unless a sanitary survey shows that sources of the indicator bacteria are non-human and an epidemiological study shows that the indicator densities are not indicative of a human health risk.

A Indicator ^d	B Geometric mean	C Single sample maximum (per 100 ml)			
		C1 Designated bathing beach (75% confidence level)	C2 Moderate use coastal recreation waters (82% confidence level)	C3 Light use coastal recreation waters (90% confidence level)	C4 Infrequent use coastal recreation waters (95% confidence level)
	ml ^c				

Footnotes to table in paragraph (c)(1):

- a. This value is for use with analytical methods 1103.1, 1603, or 1604 or any equivalent method that measures viable bacteria.
- b. Calculated using the following: single sample maximum = geometric mean * 10 + (confidence level factor * log standard deviation), where the confidence level factor is: 75%: 0.68; 82%: 0.94; 90%: 1.28; 95%: 1.65. The log standard deviation from EPA's epidemiological studies is 0.4.
- c. This value is for use with analytical methods 1106.1 or 1600 or any equivalent method that measures viable bacteria.
- d. The State may determine which of these indicators applies to its freshwater coastal recreation waters. Until a State makes that determination, *E. coli* will be the applicable indicator.
- e. These values apply to *E. coli* or enterococci regardless of origin unless a sanitary survey shows that sources of the indicator bacteria are non-human and an epidemiological study shows that the indicator densities are not indicative of a human health risk.

(2) Marine waters:

A Indicator	B Geometric mean	C Single sample maximum (per 100 ml)			
		C1 Designated bathing beach (75% confidence level)	C2 Moderate use coastal recreation waters (82% confidence level)	C3 Light use coastal recreation waters (90% confidence level)	C4 Infrequent use coastal recreation waters (95% confidence level)
Enterococci ^c	35/100 ml ^a	^b 104	^b 158	^b 276	^b 501

Footnotes to table in paragraph (c)(2):

a. This value is for use with analytical methods 1106.1 or 1600 or any equivalent method that measures viable bacteria.

b. Calculated using the following: single sample maximum = geometric mean * 10 + (confidence level factor * log standard deviation), where the confidence level factor is: 75%: 0.68; 82%: 0.94; 90%: 1.28; 95%: 1.65. The log standard deviation from EPA's epidemiological studies is 0.7.

c. These values apply to enterococci regardless of origin unless a sanitary survey shows that sources of the indicator bacteria are non-human and an epidemiological study shows that the indicator densities are not indicative of a human health risk.

- (3) As an alternative to the single sample maximum in paragraph (c)(1) or (c)(2) of this section, States may use a site-specific log standard deviation to calculate a single sample maximum for individual coastal recreation waters, but must use at least 30 samples from a single recreation season to do so.

(d) **Applicability.**

- (1) The criteria in paragraph (c) of this section apply to the coastal recreation waters of the States identified in paragraph (e) of this section and apply concurrently with any ambient recreational water criteria adopted by the State, except for those coastal recreation waters where State regulations determined by EPA to meet the requirements of Clean Water Act section 303(i) apply, in which case the State's criteria for those coastal recreation waters will apply and not the criteria in paragraph (c) of this section.
- (2) The criteria established in this section are subject to the State's general rules of applicability in the same way and to the same extent as are other Federally-adopted and State-adopted numeric criteria when applied to the same use classifications.

(e) **Applicability to specific jurisdictions.**

- (1) The criteria in paragraph (c)(1) of this section apply to fresh coastal recreation waters of the following States: Illinois, Minnesota, New York, Ohio, Pennsylvania, Wisconsin.
- (2) The criteria in paragraph (c)(2) of this section apply to marine coastal recreation waters of the following States: Alaska, California (except for coastal recreation waters within the jurisdiction of Regional Board 4), Florida, Georgia, Hawaii (except for coastal recreation waters within 300 meters of the shoreline), Louisiana, Maine (except for SA waters and SB and SC waters with human sources of fecal contamination), Maryland, Massachusetts, Mississippi, New York, North Carolina, Oregon, Puerto Rico (except for waters classified by Puerto Rico as intensely used for primary contact recreation and for those waters included in § 131.40), Rhode Island, United States Virgin Islands.

(f) ***Schedules of compliance.***

- (1) This paragraph (f) applies to any State that does not have a regulation in effect for Clean Water Act purposes that authorizes compliance schedules for National Pollutant Discharge Elimination System permit limitations needed to meet the criteria in paragraph (c) of this section. All dischargers shall promptly comply with any new or more restrictive water quality-based effluent limitations based on the water quality criteria set forth in this section.
- (2) When a permit issued on or after December 16, 2004, to a new pathogen discharger as defined in paragraph (b) of this section contains water quality-based effluent limitations based on water quality criteria set forth in paragraph (c) of this section, the permittee shall comply with such water quality-based effluent limitations upon the commencement of the discharge.
- (3) Where an existing pathogen discharger reasonably believes that it will be infeasible to comply immediately with a new or more restrictive water quality-based effluent limitations based on the water quality criteria set forth in paragraph (c) of this section, the discharger may request approval from the permit issuing authority for a schedule of compliance.
- (4) A compliance schedule for an existing pathogen discharger shall require compliance with water quality-based effluent limitations based on water quality criteria set forth in paragraph (c) of this section as soon as possible, taking into account the discharger's ability to achieve compliance with such water quality-based effluent limitations.
- (5) If the schedule of compliance for an existing pathogen discharger exceeds one year from the date of permit issuance, reissuance or modification, the schedule shall set forth interim requirements and dates for their achievement. The period between dates of completion for each requirement may not exceed one year.

If the time necessary for completion of any requirement is more than one year and the requirement is not readily divisible into stages for completion, the permit shall require, at a minimum, specified dates for annual submission of progress reports on the status of interim requirements.

- (6) In no event shall the permit issuing authority approve a schedule of compliance for an existing pathogen discharge which exceeds five years from the date of permit issuance, reissuance, or modification, whichever is sooner.
- (7) If a schedule of compliance exceeds the term of a permit, interim permit limits effective during the permit shall be included in the permit and addressed in the permit's fact sheet or statement of basis. The administrative record for the permit shall reflect final permit limits and final compliance dates.

Final compliance dates for final permit limits, which do not occur during the term of the permit, must occur within five years from the date of issuance, reissuance or modification of the permit which initiates the compliance schedule.

[69 FR 67242, Nov. 16, 2004]

§ 131.42 Antidegradation Implementation Methods for the Commonwealth of Puerto Rico.

(a) *General Policy Statement.*

- (1) All point sources of pollution are subject to an antidegradation review.
- (2) An antidegradation review shall be initiated as part of the Section 401—"Water Quality Certification Process" of the Clean Water Act.
- (3) The 401 Certification Process shall follow the procedures established by the February 2, 1989 Resolution R-89-2-2 of the Governing Board of the Puerto Rico Environmental Quality Board (EQB).
- (4) The following are not subject to an antidegradation review due to the fact that they are nondischarge systems and are managed by specific applicable Puerto Rico regulations:
 - (i) All nonpoint sources of pollutants.
 - (ii) Underground Storage Tanks.
 - (iii) Underground Injection Facilities.
- (5) The protection of water quality shall include the maintenance, migration, protection, and propagation of desirable species, including threatened and endangered species identified in the local and federal regulations.

(b) *Definitions.*

- (1) All the definitions included in Article 1 of the Puerto Rico Water Quality Standards Regulation (PRWQSR), as amended, are applicable to this procedure.
- (2) High Quality Waters:
 - (i) Are waters whose quality is better than the mandatory minimum level to support the CWA Section 101(a)(2) goals of propagation of fish, shellfish, wildlife and recreation in and on the waters. High Quality Waters are to be identified by EQB on a parameter-by-parameter basis.
 - (ii) [Reserved]
- (3) Outstanding National Resources Waters (ONRWs):
 - (i) Are waters classified as SA or SE in the PRWQSR, as amended, or any other water designated by Resolution of the Governing Board of EQB. ONRWs are waters that are recreationally or ecologically important, unique or sensitive.
 - (ii) [Reserved]

(c) *Antidegradation Review Procedure.*

- (1) The antidegradation review will commence with the submission of the CWA Section 401 water quality certification request. EQB uses a parameter-by-parameter approach for the implementation of the anti-degradation policy and will review each parameter separately as it evaluates the request

for certification. The 401 certification/antidegradation review shall comply with Article 4(B)(3) of the Puerto Rico Environmental Public Policy Act (Law No. 416 of September 22, 2004, as amended (12 LPRA 8001 *et seq.*)). Compliance with Article 4(B)(3) shall be conducted in accordance with the Reglamento de la Junta de Calidad Ambiental para el Proceso de Presentación, Evaluación y Trámite de Documentos Ambientales (EQB's Environmental Documents Regulation). As part of the evaluation of the Environmental Document an alternatives analysis shall be conducted (12 LPRA 8001(a)(5), EQB's Environmental Documents Regulation, e.g., Rules 211E and 253C), and a public participation period and a public hearing shall be provided (12 LPRA 8001(a), EQB's Environmental Documents Regulation, Rule 254).

- (2) In conducting an antidegradation review, EQB will sequentially apply the following steps:
 - (i) Determine which level of antidegradation applies
 - (A) Tier 1—Protection of Existing and Designated Uses.
 - (B) Tier 2—Protection of High Quality Waters.
 - (C) Tier 3—Protection of ONRWs.
 - (ii) [Reserved]
- (3) Review existing water quality data and other information submitted by the applicant. The applicant shall provide EQB with the information regarding the discharge, as required by the PRWQSR including, but not limited to the following:
 - (i) A description of the nature of the pollutants to be discharged.
 - (ii) Treatment technologies applied to the pollutants to be discharged.
 - (iii) Nature of the applicant's business.
 - (iv) Daily maximum and average flow to be discharged.
 - (v) Effluent characterization.
 - (vi) Effluent limitations requested to be applied to the discharge according to Section 6.11 of the PRWQSR.
 - (vii) Location of the point of discharge.
 - (viii) Receiving waterbody name.
 - (ix) Water quality data of the receiving waterbody.
 - (x) Receiving waterbody minimum flow (7Q2 and 7Q10) for stream waters.
 - (xi) Location of water intakes within the waterbody.
 - (xii) In the event that the proposed discharge will result in the lowering of water quality, data and information demonstrating that the discharge is necessary to accommodate important economic or social development in the area where the receiving waters are located.
- (4) Determine if additional information or assessment is necessary to make the decision.
- (5) Prepare an intent to issue or deny the 401 water quality certificate and publish a notice in a newspaper of wide circulation in Puerto Rico informing the public of EQB's preliminary decision and granting a public participation period of at least thirty (30) days.

- (6) Address the comments received from the interested parties and consider such comments as part of the decision making process.
- (7) Make the final determination to issue or deny the requested 401 certification. Such decision is subject to the reconsideration procedure established in Law 170 of August 12, 1988, *Ley de Procedimiento Administrativo Uniforme del Estado Libre Asociado de Puerto Rico* (3 LPRA 2165).

(d) **Implementation Procedures.**

(1) Activities Regulated by NPDES Permits

(i) Tier 1—Protection of Existing and Designated Uses:

(A) Tier 1 waters are:

- (1) Those waters of Puerto Rico (except Tier 2 or Tier 3 waters) identified as impaired and that have been included on the list required by Section 303(d) of the CWA; and
 - (2) Those waters of Puerto Rico (except Tier 2 and Tier 3 waters) for which attainment of applicable water quality standards has been or is expected to be, achieved through implementation of effluent limitations more stringent than technology-based controls (Best Practicable Technology, Best Available Technology and Secondary Treatment).
- (B) To implement Tier 1 antidegradation, EQB shall determine if a discharge would lower the water quality to the extent that it would no longer be sufficient to protect and maintain the existing and designated uses of that waterbody.
- (C) When a waterbody has been affected by a parameter of concern causing it to be included on the 303(d) List, then EQB will not allow an increase of the concentration of the parameter of concern or pollutants affecting the parameter of concern in the waterbody. This no increase will be achieved by meeting the applicable water quality standards at the end of the pipe. Until such time that a Total Maximum Daily Load (TMDL) is developed for the parameter of concern for the waterbody, no discharge will be allowed to cause or contribute to further degradation of the waterbody.
- (D) When the assimilative capacity of a waterbody is not sufficient to ensure maintenance of the water quality standard for a parameter of concern with an additional load to the waterbody, EQB will not allow an increase of the concentration of the parameter of concern or pollutants affecting the parameter of concern in the waterbody. This no increase will be achieved by meeting the applicable water quality standards at the end of the pipe. Until such time that a TMDL is developed for the parameter of concern for the waterbody, no discharge will be allowed to cause or contribute to further degradation of the waterbody.

(ii) Tier 2—Protection of High Quality Waters:

(A) To verify that a waterbody is a high quality water for a parameter of concern which initiates a Tier 2 antidegradation review, EQB shall evaluate and determine:

- (1) The existing water quality of the waterbody;
- (2) The projected water quality of the waterbody pursuant to the procedures established in the applicable provisions of Articles 5 and 10 of the PRWQSR including but not limited to, Sections 5.2, 5.3, 5.4, 10.2, 10.3, 10.4, 10.5, and 10.6;

- (3) That the existing and designated uses of the waterbody will be fully maintained and protected in the event of a lowering of water quality.

In multiple discharge situations, the effects of all discharges shall be evaluated through a waste load allocation analysis in accordance with the applicable provisions of Article 10 of the PRWQSR or the applicable provisions of Article 5 regarding mixing zones.

- (B) In order to allow the lowering of water quality in high quality waters, the applicant must show and justify the necessity for such lowering of water quality through compliance with the requirements of Section 6.11 of the PRWQSR. EQB will not allow the entire assimilative capacity of a waterbody for a parameter of concern to be allocated to a discharger, if the necessity of the requested effluent limitation for the parameter of concern is not demonstrated to the full satisfaction of EQB.

(iii) Tier 3—Protection of ONRWs:

- (A) EQB may designate a water as Class SA or SE (ONRWs) through a Resolution (PRWQSR Sections 2.1.1 and 2.2.1). Additionally, any interested party may nominate a specific water to be classified as an ONRW and the Governing Board of EQB will make the final determination. Classifying a water as an ONRW may result in the water being named in either Section 2.1.1 or 2.2.2 of the PRWQSR, which would require an amendment of the PRWQSR. The process for amending the PRWQSR, including public participation, is set forth in Section 8.6 of said regulation.

- (B) The existing characteristics of Class SA and SE waters shall not be altered, except by natural causes, in order to preserve the existing natural phenomena.

- (1) No point source discharge will be allowed in ONRWs.

- (2) [Reserved]

(2) Activities Regulated by CWA Section 404 or Rivers and Harbors Action Section 10 Permits (Discharge of Dredged or Fill Material)

- (i) EQB will only allow the discharge of dredged or fill material into a wetland if it can be demonstrated that such discharge will not have an unacceptable adverse impact either individually or in combination with other activities affecting the wetland of concern. The impacts to the water quality or the aquatic or other life in the wetland due to the discharge of dredged or fill material should be avoided, minimized and mitigated.
- (ii) The discharge of dredged or fill material shall not be certified if there is a practicable alternative to the proposed discharge which would have less adverse impact on the recipient ecosystem, so long as the alternative does not have other more significant adverse environmental consequences. Activities which are not water dependent are presumed to have practicable alternatives, unless the applicant clearly demonstrates otherwise. No discharge of dredged and fill material shall be certified unless appropriate and practicable steps have been taken which minimize potential adverse impacts of the discharge on the recipient ecosystem. The discharge of dredged or fill material to ONRWs, however, shall be governed by paragraph (d)(1)(iii) of this section.

[72 FR 70524, Dec. 12, 2007]

§ 131.43 Maine.

(a) *Bacteria criteria for waters in Indian lands.*

- (1) The bacteria content of Class AA and Class A waters shall be as naturally occurs, and the minimum number of *Escherichia coli* bacteria shall not exceed a geometric mean of 100 colony-forming units per 100 milliliters (cfu/100 ml) in any 30-day interval; nor shall 320 cfu/100 ml be exceeded more than 10% of the time in any 30-day interval.
- (2) In Class B, Class C, and Class GPA waters, the number of *Escherichia coli* bacteria shall not exceed a geometric mean of 100 colony forming units per 100 milliliters (cfu/100 ml) in any 30- day interval; nor shall 320 cfu/100 ml be exceeded more than 10% of the time in any 30-day interval.
- (3) The bacteria content of Class SA waters shall be as naturally occurs, and the number of *Enterococcus* spp. bacteria shall not exceed a geometric mean of 30 cfu/100 ml in any 30-day interval, nor shall 110 cfu/100 ml be exceeded more than 10% of the time in any 30-day interval.
- (4) In Class SA shellfish harvesting areas, the numbers of total coliform bacteria or other specified indicator organisms in samples representative of the waters in shellfish harvesting areas may not exceed the criteria recommended under the National Shellfish Sanitation Program, United States Food and Drug Administration, as set forth in the Guide for the Control of Molluscan Shellfish, 2015 Revision. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from the U.S. Food and Drug Administration Center for Food Safety and Applied Nutrition, Shellfish and Aquaculture Policy Branch, 5100 Paint Branch Parkway (HFS-325), College Park, MD 20740 or <http://www.fda.gov/Food/GuidanceRegulation/FederalStateFoodPrograms/ucm2006754.htm>. You may inspect a copy at the U.S. Environmental Protection Agency Docket Center Reading Room, William Jefferson Clinton West Building, Room 3334, 1301 Constitution Avenue NW., Washington, DC 20004, (202) 566-1744, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.
- (5) In Class SB and SC waters, the number of *Enterococcus* spp. bacteria shall not exceed a geometric mean of 30 cfu/100 ml in any 30-day interval, nor shall 110 cfu/100 ml be exceeded more than 10% of the time in any 30-day interval.

(b) *Ammonia criteria for fresh waters in Indian lands.*

- (1) The one-hour average concentration of total ammonia nitrogen (in mg TAN/L) shall not exceed, more than once every three years, the criterion maximum concentration (*i.e.*, the “CMC,” or “acute criterion”) set forth in Tables 2 and 3 of this section.
- (2) The thirty-day average concentration of total ammonia nitrogen (in mg TAN/L) shall not exceed, more than once every three years, the criterion continuous concentration (*i.e.*, the “CCC,” or “chronic criterion”) set forth in Table 4.
- (3) In addition, the highest four-day average within the same 30-day period as in (2) shall not exceed 2.5 times the CCC, more than once every three years.

2. Temperature and pH-Dependent Values of the CMC (Acute Criterion Magnitude)—*Oncorhynchus* spp. Present. (Figure 5a in
Ambient Water Quality Criteria for Ammonia-Freshwater, EPA 822-R-13-001, April 2013.)

Temperature (°C)		15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
5	33	33	32	29	27	25	23	21	19	18	16	15	14	13	12	11	9.9
6	31	31	30	28	26	24	22	20	18	17	16	14	13	12	11	10	9.5
7	30	30	29	27	24	22	21	19	18	16	15	14	13	12	11	9.8	9.0
8	28	28	27	25	23	21	20	18	17	15	14	13	12	11	10	9.2	8.5
9	26	26	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9
10	24	24	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	8.0	7.3
11	22	22	21	20	18	17	15	14	13	12	11	10	9.3	8.5	7.9	7.2	6.7
12	20	20	19	18	16	15	14	13	12	11	9.8	9.1	8.3	7.7	7.1	6.5	6.0
13	18	18	17	16	14	13	12	11	10	9.5	8.7	8.0	7.4	6.8	6.3	5.8	5.3
14	15	15	15	14	13	12	11	9.8	9.0	8.3	7.7	7.0	6.5	6.0	5.5	5.1	4.7
15	13	13	13	12	11	10	9.2	8.5	7.8	7.2	6.6	6.1	5.6	5.2	4.8	4.4	4.0
16	11	11	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5
17	9.6	9.6	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5	3.2	3.0
18	8.1	8.1	7.9	7.2	6.7	6.1	5.6	5.2	4.8	4.4	4.0	3.7	3.4	3.2	2.9	2.7	2.5
19	6.8	6.8	6.6	6.0	5.6	5.1	4.7	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.1
20	5.6	5.6	5.4	5.0	4.6	4.2	3.9	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.0	1.9	1.7
21	4.6	4.6	4.5	4.1	3.8	3.5	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4
22	3.8	3.8	3.7	3.5	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
23	3.1	3.1	3.1	2.8	2.6	2.4	2.2	2.0	1.9	1.7	1.6	1.4	1.3	1.2	1.1	1.0	0.96
24	2.6	2.6	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79
25	2.1	2.1	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	0.98	0.90	0.83	0.77	0.71	0.65
26	1.8	1.8	1.7	1.6	1.5	1.3	1.2	1.1	1.0	0.96	0.88	0.81	0.75	0.69	0.63	0.59	0.54
27	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.94	0.87	0.80	0.74	0.68	0.62	0.57	0.53	0.49	0.45
28	1.2	1.2	1.2	1.1	1.0	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37
29	1.0	1.0	1.0	0.93	0.85	0.79	0.72	0.67	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.32
30	0.88	0.88	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27

Table 3. Temperature and pH-Dependent Values of the CMC (Acute Criterion Magnitude)—*Oncorhynchus* spp. Absent. (Figure 5b in Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater, EPA 822-R-13-001, April 2013.)

Temperature (°C)		10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
pH	CMC (mg/L)	4.8	4.4	4.1	3.7	3.4	3.2	2.9	2.7	2.5	2.3	2.1	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	9.9
		4.6	4.2	3.9	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.0	2.0	1.8	1.7	1.6	1.4	1.3	1.2	1.1	1.0	9.5
6.6	4.4	4.0	4.0	3.7	3.4	3.1	2.9	2.7	2.4	2.2	2.1	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	9.8	9.0
6.8	4.1	3.8	3.5	3.2	3.0	2.8	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	9.4	8.6	7.9
6.9	3.8	3.5	3.3	3.0	2.8	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	9.3	8.5	7.9	7.2	6.7
7.0	3.8	3.5	3.3	3.0	2.8	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	9.3	8.5	7.9	7.2	6.7
7.1	3.4	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	9.1	8.3	7.7	7.1	6.5	6.0
7.2	3.1	2.9	2.7	2.5	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	1.0	9.5	8.7	8.0	7.4	6.8	6.3	5.8
7.3	2.7	2.6	2.4	2.2	2.0	1.8	1.7	1.6	1.4	1.3	1.2	1.1	1.0	9.0	8.3	7.7	7.0	6.5	6.0	5.5	5.1	4.7
7.4	2.4	2.2	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	1.0	9.8	9.0	8.3	7.7	7.0	6.5	6.0	5.5	5.1	4.7
7.5	2.1	1.9	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	9.2	8.5	7.8	7.8	7.2	6.6	6.1	5.6	5.2	4.8	4.4	4.0
7.6	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	9.3	8.6	7.9	7.3	6.7	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5
7.7	1.5	1.4	1.3	1.2	1.1	1.0	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.7	5.2	4.8	4.4	4.1	3.8	3.5	3.2	2.9
7.8	1.3	1.2	1.1	1.0	9.3	8.5	7.9	7.2	6.7	6.1	5.6	5.2	4.8	4.8	4.4	4.0	3.7	3.4	3.2	2.9	2.7	2.5
7.9	1.1	9.9	9.1	8.4	7.7	7.1	6.6	3.0	5.6	5.1	4.7	4.3	4.0	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.1
8.0	8.8	8.2	7.6	7.0	6.4	5.9	5.4	5.0	4.6	4.2	3.9	3.6	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.0	1.9	1.7
8.1	7.2	6.8	6.3	5.8	5.3	4.9	4.5	4.1	3.8	3.5	3.2	3.0	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4
8.2	6.0	5.6	5.2	4.8	4.4	4.0	3.7	3.4	3.1	2.9	2.7	2.4	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
8.3	4.9	4.6	4.3	3.9	3.6	3.3	3.1	2.8	2.6	2.4	2.2	2.0	2.0	1.9	1.7	1.6	1.4	1.3	1.2	1.1	1.0	0.96
8.4	4.1	3.8	3.5	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79
8.5	3.3	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.4	1.3	1.2	1.1	0.98	0.90	0.83	0.77	0.71	0.65
8.6	2.8	2.6	2.4	2.2	2.0	1.9	1.7	1.6	1.5	1.3	1.2	1.1	1.1	1.0	0.96	0.88	0.81	0.75	0.69	0.63	0.58	0.54
8.7	2.3	2.2	2.0	1.8	1.7	1.6	1.4	1.3	1.2	1.1	1.0	0.93	0.94	0.87	0.80	0.74	0.68	0.62	0.57	0.53	0.49	0.45
8.8	1.9	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.85	0.79	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37
8.9	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.85	0.79	0.72	0.67	0.67	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.32
9.0	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.57	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27

Temperature and pH-Dependent Values of the CCC (Chronic Criterion Magnitude). (Figure 6 in Aquatic Life Ambient Water Criteria for Ammonia-Freshwater, EPA 822-R-13-001, April 2013.)

Temperature (°C)	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
4.6	3.3	4.1	3.8	3.6	3.3	3.3	3.1	2.9	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.5	1.4	1.3	1.2	1.1
4.5	3.3	4.0	3.8	3.5	3.3	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1
4.5	2.2	3.9	3.7	3.5	3.2	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1
4.4	1.1	3.8	3.6	3.4	3.2	3.2	3.0	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1
4.2	0.0	3.7	3.5	3.3	3.1	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0
4.1	3.8	3.6	3.4	3.2	3.0	3.0	2.8	2.6	2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	0.99
3.9	3.7	3.5	3.2	3.0	2.8	2.7	2.5	2.3	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95
3.7	3.5	3.3	3.1	2.9	2.7	2.6	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.97	0.91	0.85
3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.95	0.89	0.83	0.78	0.73
3.3	3.1	2.9	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	0.98	0.92	0.86	0.81	0.76	0.71	0.67
3.0	2.8	2.7	2.5	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.60
2.8	2.6	2.4	2.3	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57
2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53
2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53	0.50	0.47
1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.60	0.56	0.53	0.50	0.44	0.41	0.41
1.7	1.6	1.5	1.4	1.3	1.2	1.1	0.99	0.92	0.87	0.81	0.76	0.71	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38	0.35
1.5	1.4	1.3	1.2	1.1	0.96	0.90	0.84	0.79	0.74	0.70	0.65	0.61	0.57	0.54	0.50	0.47	0.44	0.42	0.39	0.37	0.34	0.32	0.30
1.2	1.2	1.1	1.0	0.96	0.82	0.76	0.72	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38	0.35	0.33	0.31	0.29	0.27	0.26
1.1	0.99	0.93	0.87	0.82	0.69	0.65	0.61	0.57	0.53	0.50	0.47	0.44	0.41	0.39	0.36	0.34	0.32	0.30	0.28	0.26	0.25	0.23	0.22
0.89	0.84	0.79	0.74	0.69	0.58	0.55	0.51	0.48	0.45	0.42	0.40	0.37	0.35	0.33	0.31	0.29	0.27	0.25	0.24	0.22	0.21	0.20	0.18
0.75	0.71	0.67	0.62	0.58	0.49	0.46	0.43	0.41	0.38	0.36	0.33	0.31	0.29	0.28	0.26	0.24	0.23	0.21	0.20	0.19	0.18	0.16	0.15
0.64	0.60	0.56	0.53	0.49	0.42	0.39	0.37	0.34	0.32	0.30	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13
0.54	0.51	0.47	0.44	0.42	0.37	0.35	0.33	0.31	0.29	0.27	0.26	0.24	0.23	0.21	0.20	0.19	0.17	0.16	0.15	0.14	0.13	0.12	0.11
0.46	0.43	0.40	0.38	0.35	0.33	0.31	0.29	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.10	0.09
0.39	0.37	0.34	0.32	0.30	0.28	0.27	0.25	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.10	0.09	0.08
0.34	0.32	0.30	0.28	0.26	0.24	0.23	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.10	0.09	0.09	0.09	0.09	0.08

(c) *pH Criteria for fresh waters in Indian lands.* The pH of fresh waters shall fall within the range of 6.5 to 8.5.

(d) *Temperature criteria for tidal waters in Indian lands.*

(1) The maximum acceptable cumulative increase in the weekly average temperature resulting from all artificial sources is 1 °C (1.8 °F) during all seasons of the year, provided that the summer maximum is not exceeded.

(i) Weekly average temperature increase shall be compared to baseline thermal conditions and shall be calculated using the daily maxima averaged over a 7-day period.

(ii) Baseline thermal conditions shall be measured at or modeled from a site where there is no artificial thermal addition from any source, and which is in reasonable proximity to the thermal discharge (within 5 miles), and which has similar hydrography to that of the receiving waters at the discharge.

(2) Natural temperature cycles characteristic of the waterbody segment shall not be altered in amplitude or frequency.

(3) During the summer months (for the period from May 15 through September 30), water temperatures shall not exceed a weekly average summer maximum threshold of 18 °C (64.4 °F) (calculated using the daily maxima averaged over a 7-day period).

(e) *Natural conditions provisions for waters in Indian lands.*

(1) The provision in Title 38 of Maine Revised Statutes 464(4.C) which reads: "Where natural conditions, including, but not limited to, marshes, bogs and abnormal concentrations of wildlife cause the dissolved oxygen or other water quality criteria to fall below the minimum standards specified in section 465, 465-A and 465-B, those waters shall not be considered to be failing to attain their classification because of those natural conditions," does not apply to water quality criteria intended to protect human health.

(2) The provision in Title 38 of Maine Revised Statutes 420(2.A) which reads "Except as naturally occurs or as provided in paragraphs B and C, the board shall regulate toxic substances in the surface waters of the State at the levels set forth in federal water quality criteria as established by the United States Environmental Protection Agency pursuant to the Federal Water Pollution Control Act, Public Law 92-500, Section 304(a), as amended," does not apply to water quality criteria intended to protect human health.

(f) *Mixing zone policy for waters in Indian lands.*

(1) *Establishing a mixing zone.*

(i) The Department of Environmental Protection ("department") may establish a mixing zone for any discharge at the time of application for a waste discharge license if all of the requirements set forth in paragraphs (g)(2) and (3) of this section are satisfied. The department shall attach a description of the mixing zone as a condition of a license issued for that discharge. After opportunity for a hearing in accordance with 38 MRS section 345-A, the department may establish by order a mixing zone with respect to any discharge for which a license has been issued pursuant to section 414 or for which an exemption has been granted by virtue of 38 MRS section 413, subsection 2.

- (ii) The purpose of a mixing zone is to allow a reasonable opportunity for dilution, diffusion, or mixture of pollutants with the receiving waters such that an applicable criterion may be exceeded within a defined area of the waterbody while still protecting the designated use of the waterbody as a whole. In determining the extent of any mixing zone to be established under this section, the department will require from the applicant information concerning the nature and rate of the discharge; the nature and rate of existing discharges to the waterway; the size of the waterway and the rate of flow therein; any relevant seasonal, climatic, tidal, and natural variations in such size, flow, nature, and rate; the uses of the waterways that could be affected by the discharge, and such other and further evidence as in the department's judgment will enable it to establish a reasonable mixing zone for such discharge. An order establishing a mixing zone may provide that the extent thereof varies in order to take into account seasonal, climatic, tidal, and natural variations in the size and flow of, and the nature and rate of, discharges to the waterway.

(2) **Mixing zone information requirements.** At a minimum, any request for a mixing zone must:

- (i) Describe the amount of dilution occurring at the boundaries of the proposed mixing zone and the size, shape, and location of the area of mixing, including the manner in which diffusion and dispersion occur;
- (ii) Define the location at which discharge-induced mixing ceases;
- (iii) Document the substrate character and geomorphology within the mixing zone;
- (iv) Document background water quality concentrations;
- (v) Address the following factors:
 - (A) Whether adjacent mixing zones overlap;
 - (B) Whether organisms would be attracted to the area of mixing as a result of the effluent character; and
 - (C) Whether the habitat supports endemic or naturally occurring species.
- (vi) Provide all information necessary to demonstrate whether the requirements in paragraph (g)(3) of this section are satisfied.

(3) **Mixing zone requirements.**

- (i) Mixing zones shall be established consistent with the methodologies in Sections 4.3 and 4.4 of the "Technical Support Document for Water Quality-based Toxics Control" EPA/505/2-90-001, dated March 1991.
- (ii) The mixing zone demonstration shall be based on the assumption that a pollutant does not degrade within the proposed mixing zone, unless:
 - (A) Scientifically valid field studies or other relevant information demonstrate that degradation of the pollutant is expected to occur under the full range of environmental conditions expected to be encountered; and
 - (B) Scientifically valid field studies or other relevant information address other factors that affect the level of pollutants in the water column including, but not limited to, resuspension of sediments, chemical speciation, and biological and chemical transformation.

- (iii) Water quality within an authorized mixing zone is allowed to exceed chronic water quality criteria for those parameters approved by the department. Acute water quality criteria may be exceeded for such parameters within the zone of initial dilution inside the mixing zone. Acute criteria shall be met as close to the point of discharge as practicably attainable. Water quality criteria shall not be violated outside of the boundary of a mixing zone as a result of the discharge for which the mixing zone was authorized.
- (iv) Mixing zones shall be as small as practicable. The concentrations of pollutants present shall be minimized and shall reflect the best practicable engineering design of the outfall to maximize initial mixing. Mixing zones shall not be authorized for bioaccumulative pollutants (*i.e.*, chemicals for which the bioconcentration factors (BCF) or bioaccumulation factors (BAF) are greater than 1,000) or bacteria.
- (v) In addition to the requirements above, the department may approve a mixing zone only if the mixing zone:
 - (A) Is sized and located to ensure that there will be a continuous zone of passage that protects migrating, free-swimming, and drifting organisms;
 - (B) Will not result in thermal shock or loss of cold water habitat or otherwise interfere with biological communities or populations of indigenous species;
 - (C) Is not likely to jeopardize the continued existence of any endangered or threatened species listed under section 4 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) or result in the destruction or adverse modification of such species' critical habitat;
 - (D) Will not extend to drinking water intakes and sources;
 - (E) Will not otherwise interfere with the designated or existing uses of the receiving water or downstream waters;
 - (F) Will not promote undesirable aquatic life or result in a dominance of nuisance species;
 - (G) Will not endanger critical areas such as breeding and spawning grounds, habitat for state-listed threatened or endangered species, areas with sensitive biota, shellfish beds, fisheries, and recreational areas;
 - (H) Will not contain pollutant concentrations that are lethal to mobile, migrating, and drifting organisms passing through the mixing zone;
 - (I) Will not contain pollutant concentrations that may cause significant human health risks considering likely pathways of exposure;
 - (J) Will not result in an overlap with another mixing zone;
 - (K) Will not attract aquatic life;
 - (L) Will not result in a shore-hugging plume; and
 - (M) Is free from:
 - (1) Substances that settle to form objectionable deposits;
 - (2) Floating debris, oil, scum, and other matter in concentrations that form nuisances; and

(3) Objectionable color, odor, taste, or turbidity.

- (g) ***Dissolved oxygen criteria for class A waters throughout the State of Maine, including in Indian lands.*** The dissolved oxygen content of Class A waters shall not be less than 7 ppm (7 mg/L) or 75% of saturation, whichever is higher, year-round. For the period from October 1 through May 14, in fish spawning areas, the 7-day mean dissolved oxygen concentration shall not be less than 9.5 ppm (9.5 mg/L), and the 1-day minimum dissolved oxygen concentration shall not be less than 8 ppm (8.0 mg/L).
- (h) ***Waiver or modification of protection and improvement laws for waters throughout the State of Maine, including in Indian lands.*** For all waters in Maine, the provisions in Title 38 of Maine Revised Statutes 363-D do not apply to state or federal water quality standards applicable to waters in Maine, including designated uses, criteria to protect existing and designated uses, and antidegradation policies.

[81 FR 92487, Dec. 19, 2016, as amended at 85 FR 82939, Dec. 21, 2020]

§ 131.44 Florida.

(a) ***Phosphorus Rule.***

- (1) The document entitled "Florida Administrative Code, Chapter 62-302, Surface Water Quality Standards, Section 62-302.540, Water Quality Standards for Phosphorus Within the Everglades Protection Area, Amended May 25, 2005, as annotated by EPA" (Phosphorus Rule), is incorporated by reference as described in paragraph (a)(2). EPA is not incorporating the full text of this document, but correcting specified portions of the Phosphorus Rule as directed by a federal district court as indicated by the strikeout markings. The EPA is only incorporating by reference these crossed-out portions in the Florida Administrative Code 62-302.540. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a). Copies of the document may be inspected and obtained from the docket associated with this rulemaking (Docket Number EPA-HQ-OW-2011-0515) at <http://www.regulations.gov> electronically, at EPA's Water Docket (Address: 1301 Constitution Avenue NW., EPA West, Room B102, Washington, DC 20460, telephone number: 202-566-2426), at the National Archives and Records Administration (NARA), and finally, on the EPA Web site associated with this rulemaking at http://water.epa.gov/lawsregs/rulesregs/floridaeverglades_index.cfm. For information on the availability of this material at NARA, call 202-741-6030, or go to the following Web site http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. EPA adopts and identifies the portions of the document that have strikeout markings as portions of the Phosphorus Rule that EPA disapproved on December 3, 2009, and that are not applicable water quality standards for the purposes of the Clean Water Act. Remaining portions of the Phosphorus Rule that EPA had previously approved are applicable water quality standards for the purposes of the Clean Water Act but are not codified as federal regulations.
- (2) In the Phosphorus Rule, strike the following text:
- (i) The entire paragraph (1)(a);
 - (ii) The entire paragraph (1)(b)(2);
 - (iii) The entire paragraph and subparagraphs (2)(b), (2)(c), (2)(d), (2)(e), (2)(e)(1), (2)(e)(2) and 2(f);
 - (iv) The entire paragraph (2)(h);
 - (v) The entire paragraph (2)(l);

- (vi) The entire paragraphs (3)(a) and (3)(b);
- (vii) The entire paragraph 3(f);
- (viii) The entire paragraph (3)(h);
- (ix) In (4)(d)(2)(c), the sentence, "If these limits are not met, no action shall be required, provided that the net improvement or hydropattern restoration provisions of subsection (6) below are met.";
- (x) The entire paragraph (5)(a);
- (xi) The entire paragraph (5)(b)(2) and (5)(b)(3);
- (xii) The entire paragraph (5)(d);
- (xiii) The entire paragraph (6), including subparagraphs (6)(a), (6)(a)(1), (6)(a)(1)(a), (6)(a)(1)(b), (6)(a)(2), (6)(a)(3), (6)(a)(4), (6)(a)(5), (6)(b), (6)(b)(1), (6)(b)(2), (6)(b)(3), and (6)(c).

(b) ***Amended Everglades Forever Act.***

- (1) The document entitled "Florida Statute, Title 28, Natural Resources; Conservation, Reclamation, and Use, Section 373.4592, Everglades improvement and management, effective July 1, 2008, also known as the "Everglades Forever Act," as annotated by EPA" is incorporated by reference as described in paragraph (b)(2). The EPA is not incorporating the full text of this document, but correcting specified portions of the statute as directed by the court as indicated by the strike out markings. The EPA is only incorporating by reference these crossed-out portions in the Florida Statute, the "Everglades Forever Act." The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a). Copies of the document may be inspected and obtained from the docket associated with this rulemaking (Docket Number EPA-HQ-OW-2011-0515) at <http://www.regulations.gov> electronically, at EPA's Water Docket (Address: 1301 Constitution Avenue NW., EPA West, Room B102, Washington, DC 20460, telephone number: 202-566-2426), at the National Archives and Records Administration (NARA), and finally, on the EPA Web site associated with this rulemaking at http://water.epa.gov/lawsregs/rulesregs/floridaeverglades_index.cfm. For information on the availability of this material at NARA, call 202-741-6030, or go to the following Web site http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. EPA adopts and identifies the portions of the document that have strikeout markings as portions of the statute that EPA disapproved on December 3, 2009, and that are not applicable water quality standards for the purposes of the Clean Water Act. Remaining portions of the statute that EPA had previously approved are applicable water quality standards for the purposes of the Clean Water Act but are not codified as federal regulations.
- (2) In the Everglades Forever Act, strike the following text:
 - (i) The entire paragraph (2)(a);
 - (ii) In paragraph (2)(g), the phrase, "and further described in the Long-Term Plan.";
 - (iii) The entire paragraph (2)(j);
 - (iv) The entire paragraph (2)(l);
 - (v) The entire paragraph (2)(p);
 - (vi) The entire paragraphs (3)(b), (3)(c), (3)(d) and (3)(e);

- (vii) In sentence 9 of paragraph (4)(a), the phrase, “design, construction, and implementation of the initial phase of the Long-Term Plan, including operation and maintenance, and research for the projects and strategies in the initial phase of the Long-Term Plan, and including”;
 - (viii) In sentence 1 of subparagraph (4)(a)(4), the phrase, “however, the district may modify this schedule to incorporate and accelerate enhancements to STA 3/4 as directed in the Long-Term Plan,”;
 - (ix) The entire subparagraph (4)(a)(6);
 - (x) In subparagraph (4)(e)(2), the entire sentences 7, 8 and 9;
 - (xi) In subparagraph (4)(e)(3), the entire sentence 3;
 - (xii) In sentence 1 of paragraph (10), the phrase, “to implement the pre-2006 projects and strategies of the Long-Term Plan”, the phrase, “in all parts of the Everglades Protection Area”, and the phrase “and moderating provisions”;
 - (xiii) The entire paragraph (10)(a).
- (3) EPA is not incorporating the text annotations added by hand to the Everglades Forever Act. These text inserts are included only for the convenience of the reader and to improve the readability of the document.

[77 FR 46303, Aug. 3, 2012]

§ 131.45 Revision of certain Federal water quality criteria applicable to Washington.

- (a) **Scope.** This section promulgates human health criteria for priority toxic pollutants in surface waters in Washington.
- (b) **Criteria for priority toxic pollutants in Washington.** The applicable human health criteria are shown in table 1 to this paragraph (b).

Table 1 to Paragraph (b)—Human Health Criteria for Washington

A			B					C	
	Chemical	CAS Number	Cancer Slope Factor, CSF (per mg/kg·d) (B1)	Relative Source Contribution, RSC (-) (B2)	Reference Dose, RfD (mg/kg·d) (B3)	Bio-accumulation Factor (L/kg tissue) (B4)	Bio-concentration Factor (L/kg tissue) (B5)	Water & Organisms (µg/L) (C1)	Organisms Only (µg/L) (C2)
1	1,1,1-Trichloroethane	71556	-	0.50	2	10	-	20,000	50,000
2	1,1,2,2-Tetrachloroethane	79345	0.2	-	-	8.4	-	0.1	0.3
3	1,1,2-Trichloroethane	79005	0.057	-	-	8.9	-	0.35	0.90
4	1,1-Dichloroethylene	75354	-	0.50	0.05	2.6	-	700	4,000
5	1,2,4-Trichlorobenzene	120821	0.029	-	-	430	-	0.036	0.037
6	1,2-Dichlorobenzene	95501	-	0.50	0.3	82	-	700	800
7	1,2-Dichloroethane	107062	0.0033	-	-	1.9	-	8.9	73
8	1,2-Diphenylhydrazine	122667	0.8	-	-	27	-	0.01	0.02
9	1,2-Trans-Dichloroethylene	156605	-	0.50	0.02	4.7	-	200	1,000
10	1,3-Dichlorobenzene	541731	-	0.50	0.002	190	-	2	2
11	1,3-Dichloropropene	542756	0.122	-	-	3.0	-	0.22	1.2
12	1,4-Dichlorobenzene	106467	-	0.50	0.07	84	-	200	200
13	2,4-Dichlorophenol	120832	-	0.50	0.003	48	-	10	10
14	2,4-Dinitrophenol	51285	-	0.50	0.002	4.4	-	30	100
15	2-Chloronaphthalene	91587	-	0.80	0.08	240	-	100	100
16	2-Methyl-4,6-Dinitrophenol	534521	-	0.50	0.0003	10	-	3	7
17	4,4'-DDD	72548	0.24	-	-	240,000	-	7.9E-06	7.9E-06
18	4,4'-DDE	72559	0.167	-	-	3,100,000	-	8.8E-07	8.8E-07
19	4,4'-DDT	50293	0.34	-	-	1,100,000	-	1.2E-06	1.2E-06
20	Acenaphthene	83329	-	0.50	0.06	510	-	30	30
21	Aldrin	309002	17	-	-	650,000	-	4.1E-08	4.1E-08
22	alpha-BHC	319846	6.3	-	-	1,500	-	4.8E-05	4.8E-05
23	alpha-Endosulfan	959988	-	0.50	0.006	200	-	6	7
24	Anthracene	120127	-	0.50	0.3	610	-	100	100
25	Antimony	7440360	-	0.50	0.0004	-	1	6	90
26	Arsenic*	7440382	1.75	-	-	-	44	*0.018	*0.14

A			B					C	
	Chemical	CAS Number	Cancer Slope Factor, CSF (per mg/kg·d) (B1)	Relative Source Contribution, RSC (-) (B2)	Reference Dose, RfD (mg/kg·d) (B3)	Bio-accumulation Factor (L/kg tissue) (B4)	Bio-concentration Factor (L/kg tissue) (B5)	Water & Organisms (µg/L) (C1)	Organisms Only (µg/L) (C2)
27	Benzo(a) Anthracene	56553	0.73	-	-	3,900	-	0.00016	0.00016
28	Benzo(a) Pyrene	50328	7.3	-	-	3,900	-	1.6E-05	1.6E-05
29	Benzo(b) Fluoranthene	205992	0.73	-	-	3,900	-	0.00016	0.00016
30	Benzo(k) Fluoranthene	207089	0.073	-	-	3,900	-	0.0016	0.0016
31	beta-BHC	319857	1.8	-	-	180	-	0.0013	0.0014
32	Bis(2-Chloro-1-Methylethyl) Ether**	108601	-	0.50	0.04	10	-	400	900
33	Bis(2-Ethylhexyl) Phthalate	117817	0.014	-	-	710	-	0.045	0.046
34	Bromoform	75252	0.0045	-	-	8.5	-	4.6	12
35	Butylbenzyl Phthalate	85687	0.0019	-	-	19,000	-	0.013	0.013
36	Chlordane	57749	0.35	-	-	60,000	-	2.2E-05	2.2E-05
37	Chlorobenzene	108907	-	0.50	0.02	22	-	100	200
38	Chlorodibromomethane	124481	0.04	-	-	5.3	-	0.60	2.2
39	Chloroform	67663	-	0.50	0.01	3.8	-	100	600
40	Chrysene	218019	0.0073	-	-	3,900	-	0.016	0.016
41	Cyanide	57125	-	0.50	0.0006	-	1	9	100
42	Dibenzo(a,h) Anthracene	53703	7.3	-	-	3,900	-	1.6E-05	1.6E-05
43	Dichlorobromomethane	75274	0.034	-	-	4.8	-	0.73	2.8
44	Dieldrin	60571	16	-	-	410,000	-	7.0E-08	7.0E-08
45	Diethyl Phthalate	84662	-	0.50	0.8	920	-	200	200
46	Dimethyl Phthalate	131113	-	0.50	10	4,000	-	600	600
47	Di-n-Butyl Phthalate	84742	-	0.50	0.1	2,900	-	8	8
48	Endosulfan Sulfate	1031078	-	0.50	0.006	140	-	9	-
49	Endrin	72208	-	0.80	0.0003	46,000	-	0.002	0.002
50	Ethylbenzene	100414	-	0.50	0.022	160	-	29	31
51	Fluoranthene	206440	-	0.50	0.04	1,500	-	6	6
52	Fluorene	86737	-	0.50	0.04	710	-	10	10
53	gamma-BHC; Lindane	58899	-	0.50	0.0047	2,500	-	0.43	0.43
54	Heptachlor	76448	4.1	-	-	330,000	-	3.4E-07	3.4E-07
55	Heptachlor Epoxide	1024573	5.5	-	-	35,000	-	2.4E-06	2.4E-06
56	Hexachlorobenzene	118741	1.02	-	-	90,000	-	5.0E-06	5.0E-06
57	Hexachlorobutadiene	87683	0.04	-	-	1,100	-	0.01	0.01
58	Hexachlorocyclopentadiene	77474	-	0.50	0.006	1,300	-	1	1
59	Hexachloroethane	67721	0.04	-	-	600	-	0.02	0.02
60	Indeno(1,2,3-cd) Pyrene	193395	0.73	-	-	3,900	-	0.00016	0.00016
61	Methyl Bromide	74839	-	0.50	0.02	1.4	-	300	-
62	Methylene Chloride	75092	0.002	-	-	1.6	-	10	100
63	Methylmercury	22967926	-	2.7E-05	0.0001	-	-	-	^b 0.03 (mg/kg)
64	Nickel	7440020	-	0.50	0.02	-	47	80	100

A		B					C	
Chemical	CAS Number	Cancer Slope Factor, CSF (per mg/kg·d) (B1)	Relative Source Contribution, RSC (-) (B2)	Reference Dose, RfD (mg/kg·d) (B3)	Bio-accumulation Factor (l/kg tissue) (B4)	Bio-concentration Factor (l/kg tissue) (B5)	Water & Organisms (µg/L) (C1)	Organisms Only (µg/L) (C2)
65 Nitrobenzene	98953	-	0.50	0.002	3.1	-	30	100
66 Pentachlorophenol (PCP)	87865	0.4	-	-	520	-	0.002	0.002
67 Phenol	108952	-	0.50	0.6	1.9	-	9,000	70,000
68 Polychlorinated Biphenyls (PCBs)		2	-	-	-	31,200	7E-06	7E-06
69 Pyrene	129000	-	0.50	0.03	860	-	8	8
70 Selenium	7782492	-	0.50	0.005	-	4.8	60	200
71 Tetrachloroethylene	127184	0.0021	-	-	76	-	2.4	2.9
72 Toluene	108883	-	0.50	0.0097	17	-	72	130
73 Trichloroethylene	79016	0.05	-	-	13	-	0.3	0.7
74 Vinyl Chloride	75014	1.5	-	-	1.7	-	-	0.18
75 Zinc	7440666	-	0.50	0.3	-	47	1,000	1,000
^a This criterion refers to the inorganic form of arsenic only.								
^b This criterion is expressed as the fish tissue concentration of methylmercury (mg methylmercury/kg fish). See <i>Water Quality Criterion for the Protection of Human Health: Methylmercury</i> (EPA-823-R-01-001, January 3, 2001) for how this value is calculated using the criterion equation in EPA's 2000 Human Health Methodology rearranged to solve for a protective concentration in fish tissue rather than in water.								
^c This criterion applies to total PCBs (e.g., the sum of all congener or isomer or homolog or Aroclor analyses).								
[*] These criteria were promulgated for Washington in the National Toxics Rule at § 131.36, and are moved into § 131.45 to have one comprehensive human health criteria rule for Washington.								
^{**} Bis(2-Chloro-1-Methylethyl) Ether was previously listed as Bis(2-Chloroisopropyl) Ether.								

(c) **Applicability.**

- (1) The criteria in paragraph (b) of this section apply to waters with Washington's designated uses cited in paragraph (d) of this section and apply concurrently with other applicable water quality criteria.
- (2) The criteria established in this section are subject to Washington's general rules of applicability in the same way and to the same extent as are other federally promulgated and state-adopted numeric criteria when applied to the same use classifications in paragraph (d) of this section.
 - (i) For all waters with mixing zone regulations or implementation procedures, the criteria apply at the appropriate locations within or at the boundary of the mixing zones; otherwise the criteria apply throughout the waterbody including at the end of any discharge pipe, conveyance or other discharge point within the waterbody.
 - (ii) The state must not use a low flow value below which numeric non-carcinogen and carcinogen human health criteria can be exceeded that is less stringent than the harmonic mean flow for waters suitable for the establishment of low flow return frequencies (i.e., streams and rivers). Harmonic mean flow is a long-term mean flow value calculated by dividing the number of daily flows analyzed by the sum of the reciprocals of those daily flows.
 - (iii) If the state does not have such a low flow value for numeric criteria, then none will apply and the criteria in paragraph (b) of this section herein apply at all flows.

(d) **Applicable use designations.**

- (1) All waters in Washington assigned to the following use classifications are subject to the criteria identified in paragraph (d)(2) of this section:
 - (i) Fresh waters—
 - (A) Miscellaneous uses: Harvesting (Fish harvesting);
 - (B) Recreational uses;
 - (C) Water supply uses: Domestic water (Domestic water supply);
 - (ii) Marine waters—
 - (A) Miscellaneous uses: Harvesting (Salmonid and other fish harvesting, and crustacean and other shellfish (crabs, shrimp, scallops, etc.) harvesting);
 - (B) Recreational uses;
 - (C) Shellfish harvesting: Shellfish harvest (Shellfish (clam, oyster, and mussel) harvesting)

Note to paragraph (d)(1): The source of these uses is Washington Administrative Code 173-201A-600 for Fresh waters and 173-201A-610 for Marine waters.

- (2) For Washington waters that include the use classification of Domestic Water, the criteria in column C1 and the methylmercury criterion in column C2 of Table 1 in paragraph (b) of this section apply. For Washington waters that include any of the following use classifications but do not include the use classification of Domestic Water, the criteria in column C2 of Table 1 in paragraph (b) of this section apply: Harvesting (fresh and marine waters), Recreational Uses (fresh and marine waters), and Shellfish Harvesting.

[81 FR 85435, Nov. 28, 2016, as amended at 85 FR 28492, May 13, 2020; 87 FR 69198, Nov. 18, 2022]

§ 131.46 Aquatic life criterion for cadmium in Oregon.

- (a) **Scope.** This section promulgates an acute aquatic life criterion for cadmium in freshwaters in Oregon.

- (b) **Criterion for cadmium in Oregon.** The aquatic life criterion in Table 1 applies to all freshwaters in Oregon where fish and aquatic life are a designated use.

TABLE 1—CADMIUM AQUATIC LIFE CRITERION FOR OREGON FRESHWATERS

Metal	CAS No.	Criterion Maximum Concentration (CMC) ³ (µg/L)
Cadmium ^{1 2}	7440439	$[e^{(0.9789 \times \ln(\text{hardness}) - 3.866)}] \times CF$ Where $CF = 1.136672 - [(\ln \text{hardness}) \times (0.041838)]$.

¹ The criterion for cadmium is expressed as the dissolved metal concentration.

² CF is the conversion factor used to convert between the total recoverable and dissolved forms of cadmium. The term (ln hardness) in the CMC and the CF equation is the natural logarithm of the ambient hardness in mg/L (CaCO₃). The default hardness concentrations from the applicable ecoregion in Table 2 of paragraph (c) of this section shall be used to calculate cadmium criteria in the absence of sufficiently representative ambient hardness data.

³ The CMC is the highest allowable one-hour average instream concentration of cadmium. The CMC is not to be exceeded more than once every three years. The CMC is rounded to two significant figures.

- (c) **Estimated Values To Calculate Cadmium Criteria.** The default inputs to calculate cadmium criteria in the absence of sufficiently representative ambient data are shown in Table 2.

TABLE 2—HARDNESS DEFAULTS WITHIN EACH LEVEL III ECOREGION IN OREGON

Level III ecoregion	Hardness (mg/L)
1 Coast Range	34.12
3 Willamette Valley	32.39
4 Cascades	28.39
9 Eastern Cascades Slopes and Foothills	36.08
10 Columbia Plateau	58.82
11 Blue Mountains	43.49
12 Snake River Plain	123.5
78 Klamath Mountains	40.61
80 Northern Basin and Range	98.62

- (d) **Applicability.**

- (1) The criterion in paragraph (b) of this section applies to freshwaters in Oregon where fish and aquatic life are a designated use, and applies concurrently with other applicable water quality criteria.

- (2) The criterion established in this section is subject to Oregon's general rules of applicability in the same way and to the same extent as are other federally promulgated and state-adopted numeric criteria when applied to freshwaters in Oregon where fish and aquatic life are a designated use.
- (i) For all waters with mixing zone regulations or implementation procedures, the criterion applies at the appropriate locations within or at the boundary of the mixing zones and outside of the mixing zones; otherwise the criterion applies throughout the water body including at the end of any discharge pipe, conveyance or other discharge point within the water body.

(ii) The state shall not use a low flow value that is less stringent than the values listed below for waters suitable for the establishment of low flow return frequencies (*i.e.*, streams and rivers) when calculating the available dilution for the purposes of determining the need for and establishing Water Quality-Based Effluent Limitations in National Pollutant Discharge Elimination System permits:

Acute criteria (CMC)	1Q10 or 1B3
Where:	
1. 1Q10 is the lowest one-day average flow event expected to occur once every ten years, on average (determined hydrologically).	
2. 1B3 is the lowest one-day average flow event expected to occur once every three years, on average (determined biologically).	

[82 FR 9173, Feb. 3, 2017]

§ 131.47 Aquatic life criteria for aluminum in Oregon.

- (a) **Scope.** This section promulgates aquatic life criteria for aluminum in fresh waters in Oregon that are jurisdictional under the Clean Water Act.

- (b) **Criteria for aluminum in Oregon.** The aquatic life criteria in Table 1 to this paragraph (b) apply to all fresh waters in Oregon that are jurisdictional under the Clean Water Act to protect the fish and aquatic life designated uses.

**TABLE 1 TO PARAGRAPH (b)—ALUMINUM AQUATIC LIFE CRITERIA FOR OREGON
FRESH WATERS**

Metal	CAS No.	Criterion maximum concentration (CMC)³ (µg/L)	Criterion continuous concentration (CCC)⁴ (µg/L)
Aluminum ¹ ²	7429905	Acute (CMC) and chronic (CCC) freshwater aluminum criteria values for a site shall be calculated using the 2018 Aluminum Criteria Calculator (<i>Aluminum Criteria Calculator V.2.0.xlsx</i>), or a calculator in R or other software package using the same 1985 Guidelines calculation approach and underlying model equations as in the Aluminum Criteria Calculator V.2.0.xlsx, as defined in EPA's Final Aquatic Life Ambient Water Quality Criteria for Aluminum. ⁵	

¹ To apply the aluminum criteria for Clean Water Act purposes, criteria values based on ambient water chemistry conditions must protect the water body over the full range of water chemistry conditions, including during conditions when aluminum is most toxic.

² These criteria are based on aluminum toxicity studies where aluminum was analyzed using total recoverable analytical methods. Oregon may utilize total recoverable analytical methods to implement the criteria. For characterizing ambient waters, Oregon may also utilize, as scientifically appropriate and as allowable by State and Federal regulations, analytical methods that measure the bioavailable fraction of aluminum (e.g., utilizing a less aggressive initial acid digestion, such as to a pH of approximately 4 or lower, that includes the measurement of amorphous aluminum hydroxide yet minimizes the measurement of mineralized forms of aluminum such as aluminum silicates associated with suspended sediment particles or clays). Oregon shall use measurements of total recoverable aluminum where required by Federal regulations.

³ The CMC is the highest allowable one-hour average ambient concentration of aluminum. The CMC is not to be exceeded more than once every three years. The CMC is rounded to two significant figures.

⁴ The CCC is the highest allowable four-day average ambient concentration of aluminum. The CCC is not to be exceeded more than once every three years. The CCC is rounded to two significant figures.

⁵ EPA-822-R-18-001, *Final Aquatic Life Ambient Water Quality Criteria for Aluminum—2018*, December 2018, is incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available from U.S. Environmental Protection Agency, Office of Water, Health and Ecological Criteria Division (4304T), 1200 Pennsylvania Avenue, NW, Washington, DC 20460; telephone number: (202) 566-1143, www.epa.gov/wqc/aquatic-life-criteria-aluminum. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov or go to www.archives.gov/federal-register/cfr/ibr-locations.html.

- (c) **Applicability.**

- (1) The criteria in paragraph (b) of this section are the applicable acute and chronic aluminum aquatic life criteria in all fresh waters in Oregon that are jurisdictional under the Clean Water Act to protect the fish and aquatic life designated uses.
- (2) The criteria established in this section are subject to Oregon's general rules of applicability in the same way and to the same extent as are other federally promulgated and state-adopted numeric criteria when applied to fresh waters in Oregon that are jurisdictional under the Clean Water Act to protect the fish and aquatic life designated uses.
- (3) For all waters with mixing zone regulations or implementation procedures, the criteria apply at the appropriate locations within or at the boundary of the mixing zones and outside of the mixing zones; otherwise the criteria apply throughout the water body including at the end of any discharge pipe, conveyance, or other discharge point within the water body.

[86 FR 14845, Mar. 19, 2021]