

Rulemaking Index Water Quality Rules Chapter 1 and Chapter 2

EQC Docket 25-3101

Index of Materials

The following is an index of materials that the Department of Environmental Quality, Water Quality Division, relied upon to develop the proposed rule, in accordance with Department of Environmental Quality, Rules of Practice and Procedure, Chapter 3, Section 5(b):

- 1. Wyoming Department of Environmental Quality. Water Quality Division. *Wyoming Surface Water Classification List*. June 21, 2001. Updated March 16, 2001.
- 2. Wyoming Department of Environmental Quality. Water Quality Division. Surface Water Quality Standards. *Wyoming Surface Water Designations*. February 2025.
- 3. Wyoming Department of Environmental Quality. Wyoming Surface Water Quality Standards. *Implementation Policies for Antidegradation, Mixing Zones and Dilution Allowances, Turbidity, and Use Attainability Analysis*. September 24, 2013.
- 4. Wyoming Department of Environmental Quality. *Interim Policy on Establishing Effluent Limits for Permitted Point Source Discharges to Class 1 Water Tributaries*. Water Quality Division. August 2, 2007.
- 5. Wyoming Department of Environmental Quality. Water Quality Division. Wyoming Recreation Designated Uses Web Map. Accessed at: https://gis.deq.wyo.gov/portal/apps/webappviewer/index.html?id=076b56422fcc4d75a8dfed298e6c524a.
- 6. Clean Water Act, 33 U.S.C. § 1251 et seq. Accessed from: https://www.govinfo.gov/app/details/USCODE-2023-title33/USCODE-2023-title33-chap26-subchapI-sec1251/context.
- 7. United States Environmental Protection Agency. 40 CFR § 130. Water Quality Planning and Management. Accessed from: https://www.ecfr.gov/current/title-40/chapter-l/subchapter-D/part-130.
- 8. United States Environmental Protection Agency. 40 CFR § 131. Water Quality Standards. Accessed from: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-131.

- South Dakota Department of Environment and Natural Resources. South Dakota
 Antidegradation Implementation Procedures. October 1998. Accessed from:
 https://www.epa.gov/sites/default/files/2014-12/documents/sd-antidegradation.pdf.
- 10. United States Environmental Protection Agency. 40 CFR § 141. National Primary Drinking Water Regulations. Accessed from: https://www.ecfr.gov/current/title-40/chapter-l/subchapter-D/part-141.
- 11. Colorado Department of Public Health and the Environment. Water Quality Control Commission. Regulation No. 31 The Basic Standards and Methodologies for Surface Water. 5 CCR 1002-31. Effective Date June 14, 2023. Accessed from:

 https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=10835&fileName=5
 %20CCR%201002-31.
- 12. Idaho Department of Environmental Quality. Idaho Water Quality Standards. Surface and Wastewater Division. 58.01.02 Water Quality Standards. Zero-Based Regulation Review 2024 for Rulemaking and 2025 Legislative Review. Accessed from: https://www.deq.idaho.gov/water-quality/surface-water/water-quality-standards/.
- 13. United States Environmental Protection Agency. Model Water Quality Standards Template for Waters on Indian Reservations. EPA-815-D-23-002. Office of Water. Office of Science and Technology. February 2023. Accessed from: https://www.epa.gov/wqs-tech/water-quality-standards-tools-tribes.
- 14. United States Environmental Protection Agency. Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health. EPA-822-B-00-004. Office of Water. Office of Science and Technology. October 2000. Accessed from: https://www.epa.gov/sites/default/files/2018-10/documents/methodology-wqc-protection-hh-2000.pdf.
- 15. United States Environmental Protection Agency. Guidelines for Deriving Numerical Water Quality Criteria for the Protection of Aquatic Organism and Their Uses. PB85-227049. Office of Research and Development. Electronic version created December 2010 from 1985 version. Accessed from: https://www.epa.gov/sites/default/files/2016-02/documents/guidelines-water-quality-criteria.pdf.
- 16. United States Army Corps of Engineers Wetland Determination Data Sheet Arid West Region. Accessed from: https://www.publications.usace.army.mil/Portals/76/Users/028/00/3100/Eng_Form_6116-1_2024Feb.pdf
- 17. United States Environmental Protection Agency. Water Quality Standards Handbook Chapter 5: General Policies. EPA-820-B-14-004. Office of Water. September 2014. Accessed from: https://www.epa.gov/wqs-tech/water-quality-standards-handbook
- 18. United States Environmental Protection Agency. Water Quality Standards Handbook Chapter 3: Water Quality Criteria. Office of Water. EPA-823-B-23-001. 2023. Accessed from: https://www.epa.gov/wqs-tech/water-quality-standards-handbook.
- 19. United States Environmental Protection Agency. 40 CFR § 423, Appendix A to Part 423. Priority Pollutants. Accessed from: https://www.ecfr.gov/current/title-40/chapter-l/subchapter-N/part-423/appendix-Appendix%20A%20to%20Part%20423.

- 20. United States Environmental Protection Agency. 40 CFR § 401.15. Toxic Pollutants. Accessed from: https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N/part-401/section-401.15.
- 21. Colorado River Basin Salinity Control Forum. 2023 Review Water Quality Standards for Salinity Colorado River System. October 2023. Accessed from: https://www.coloradoriversalinity.org/index.php.
- 22. United States Environmental Protection Agency. 40 CFR § 122.47 and 40 CFR § 123.25. Schedules of Compliance. Accessed from: https://www.ecfr.gov/current/title-40/chapter-l/subchapter-D/part-122/subpart-C/section-122.47.
- 23. Wyoming Department of Environmental Quality. Wyoming's Methods for Determining Surface Water Quality Condition. December 21, 2020.
- 24. United States Environmental Protection Agency. Technical Support Document for Water Quality-Based Toxics Control. EPA/505/2-90-001. Office of Water. March 1991. Accessed from: https://www3.epa.gov/npdes/pubs/owm0264.pdf.
- 25. United States Environmental Protection Agency. NPDES Permit Writers' Manual. EPA-833-K-10-001. Office of Water. September 2010. Accessed from: https://www.epa.gov/sites/default/files/2015-09/documents/pwm_2010.pdf.
- 26. United States Environmental Protection Agency Region VIII. Mixing Zones and Dilution Policy. September 1995.
- 27. United States Environmental Protection Agency. Water Quality Standards Handbook Chapter 2: Designation of Uses. EPA-823-B-12-002. Office of Water. 2012. Accessed from: https://www.epa.gov/sites/default/files/2014-10/documents/handbook-chapter2.pdf.
- 28. State of Ohio. Water Quality Standards. Chapter 3745-1 of the Administrative Code. December 20, 2023. Accessed from: https://epa.ohio.gov/static/Portals/35/rules/01-all.pdf.
- 29. Wyoming State Engineer's Office. Wyoming Beneficial Uses. August 19, 2019.
- 30. North Dakota Administrative Code. Chapter 33.1-16-02.1. Standards of Quality for Waters of the State. Effective January 1, 2024. Accessed from: https://www.ndlegis.gov/information/acdata/pdf/33.1-16-02.1.pdf.
- 31. Dorevitch, S; Pratap, P; Wroblewski, M; Hryhorczuk, D; Li, H; Liu, L; and Scheff, P. Environmental Health Perspectives. Health Risks of Limited-Contact Water Recreation. Volume 120. Number 2. February 2012. Accessed from: https://ehp.niehs.nih.gov/doi/10.1289/ehp.1103934.
- 32. Russo, G; Eftim, S; Goldstone, A; Dufour, A; Nappier, S; and Wade, T. Evaluating Health Risks Associated With Exposure to Ambient Surface Waters During Recreational Activities: A Systematic Review and Meta-Analysis. Water Research. 176. 2020. Accessed via: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10287035/.
- 33. United States Environmental Protection Agency. Office of Science and Technology. Office of Water. 823-B-22-001. An Approach for Applying EPA's 2012 Recreational Water Quality Criteria Recommendation to Non-primary Contact Exposure Scenarios. White Paper. January 2022. Accessed from: https://www.epa.gov/system/files/documents/2022-01/rec-criteria-white-paper-final.pdf.

- 34. United States Environmental Protection Agency. Recreational Water Quality Criteria. Office of Water 820-F-12-058. 2012. Accessed from: https://www.epa.gov/sites/default/files/2015-10/documents/rwqc2012.pdf.
- 35. United States Environmental Protection Agency. Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin. Office of Water. 822-R-19-001. May 2019. Accessed from: https://www.epa.gov/sites/default/files/2019-05/documents/hh-rec-criteria-habs-document-2019.pdf.
- 36. Missouri Code of State Regulations. Missouri Department of Natural Resources. Rules of the Department of Natural Resources. Division 20 Clean Water Commission. Chapter 7 Water Quality. September 30, 2023. Accessed from: https://www.sos.mo.gov/CMSImages/AdRules/csr/current/10csr/10c20-7a.pdf#page=12.
- 37. Arizona Administrative Code. Title 18. Environmental Quality. Chapter 11. Department of Environmental Quality Water Quality Standards. December 11, 2023. Accessed from: https://apps.azsos.gov/public_services/Title_18/18-11.pdf.
- 38. United States Environmental Protection Agency. Office of Water. EPA 823/4-88-100. Guidance for State Implementation of Water Quality Standards for CWA Section 303(C)(2)(B). December 1988. Accessed from: https://www.epa.gov/sites/default/files/2018-10/documents/guidance-state-implement-wqs-cwa-sect303c.pdf.
- 39. United States Environmental Protection Agency. Region 8. Letter from Max H. Dodson. Compliance with Toxics Requirements of Section 303(c)(2)(B) of the Clean Water Act and the Water Quality Standards Regulation (40 CFR 131.11). January 17, 1990.
- 40. United States Environmental Protection Agency. Technical Support Document for Water Quality-Based Toxics Control. EPA-440/4-85-032. Office of Water. September 1985. Accessed from: https://www.epa.gov/nscep.
- 41. United States Environmental Protection Agency. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, October, 2002. Accessed from: https://www.epa.gov/sites/default/files/2015-08/documents/acute-freshwater-and-marine-wet-manual_2002.pdf.
- 42. United States Environmental Protection Agency. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms. EPA-600/4-85/013. March 1985. Accessed from: https://www.epa.gov/nscep.
- 43. United States Environmental Protection Agency. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. Fourth Edition, October 2002. Accessed from: https://www.epa.gov/sites/default/files/2015-08/documents/short-term-chronic-freshwater-wet-manual_2002.pdf.
- 44. United States Environmental Protection Agency. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Second Edition. EPA-600/4-89/001. March 1989. Accessed from: https://www.epa.gov/nscep.
- 45. United States Environmental Protection Agency. National Pollutant Discharge Elimination System Whole Effluent Toxicity Permit Writers' Manual. EPA-833-B-24_001. July 2024.

- Accessed from: https://www.epa.gov/system/files/documents/2024-06/npdes-wet-permit-writers-manual.pdf.
- 46. United States Environmental Protection Agency. Office of Water. EPA 440/5-86-001. Quality Criteria for Water 1986. May 1, 1986. Accessed from: https://www.epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1986.pdf.
- 47. United States Environmental Protection Agency. EPA 440-9-76-023. Quality Criteria for Water. July 26, 1976. Accessed from: https://www.epa.gov/sites/default/files/2018-10/documents/quality-criteria-water-1976.pdf.
- 48. Newcombe, C.P. and Jensen, J.O. Channel Suspended Sediment and Fisheries: A Synthesis for Quantitative Assessment of Risk and Impact. North American Journal of Fisheries Management. November 1996.
- 49. State of Oregon Department of Environmental Quality. Water Quality Standards. Turbidity Technical Review. Summary of Sources, Effects, and Issues Related to Revising the Statewide Water Quality Standard for Turbidity. April 24, 2014. Accessed from: https://www.oregon.gov/deg/FilterDocs/TurbidityTechRev.pdf.
- 50. Berry, W.; Rubinstein, N.; Melzian, B.; and Hill, B. The Biological Effects of Suspended and Bedded Sediment (SABS) in Aquatic Systems: A Review. United States Environmental Protection Agency. Office of Research and Development. Internal Report. August 20, 2003. Accessed from: https://archive.epa.gov/epa/sites/production/files/2015-10/documents/sediment-appendix1.pdf.
- 51. United States Environmental Protection Agency. Office of Water. Office of Research and Development. EPA-822-R-06-001. Framework for Developing Suspended and Bedded Sediments (SABS) Water Quality Criteria. May 2006. Accessed from: https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=164423.
- 52. Wyoming Department of Environmental Quality. Water Quality Division. Badwater Creek Project Water Quality Criteria Evaluation Report. December 2023. Accessed from: https://gis.deq.wyo.gov/MAPS/WQD_ACTIVE_PROJECTS/IR/AR/WYBH_BadwaterCreekAlkaliCreek 2020.pdf
- 53. Wyoming Department of Environmental Quality. Water Quality Division. Water Quality Condition and Designated Use Determination for Crow Creek, South Platte Basin, 2007-2008. June 2009. Accessed from:

 https://gis.deq.wyo.gov/MAPS/WQD_ACTIVE_PROJECTS/IR/AR/WYSP_CrowCreek_2 009.pdf
- 54. Wyoming Department of Environmental Quality. Water Quality Division. Technical Support Provided by Tetra Tech, Inc. Crow Creek Watershed Sediment Total Maximum Daily Loads. September 19, 2022. Accessed from: https://drive.google.com/file/d/1eScOkx4K5QUrLhAABaqRX4mAYOXitUbD/view?pli=1
- 55. Peterson, C.M. Master's Thesis, University of Wyoming. Development of Thermal Tiers and Regulatory Criteria for Wyoming Stream Fishes. May 2017.
- 56. Lake Stratification and Mixing. Lake Notes. Illinois Environmental Protection Agency. Northeastern Illinois Planning Commission. DWPC-Lake and Watershed Unit. November 1997. Accessed from:

- https://epa.illinois.gov/content/dam/soi/en/web/epa/documents/water/conservation/lake-notes/lake-stratification.pdf.
- 57. Rabaey, J.; Domine, L.; Zimmer, K.; Cotner, J. Winter Oxygen Regimes in Clear and Turbid Shallow Lakes. JGR Biogeosciences. 2021. Accessed from: https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2020JG006065.
- 58. Lyons, J.; Parks, T; Minahan, K; Ruesch, A. Evaluation of oxythermal metrics and benchmarks for the protection of cisco (*Coregonus artedi*) habitat quality and quantity in Wisconsin lakes. Canadian Journal of Fisheries and Aquatic Sciences. 2018. Volume 75: 600-608.
- 59. United States Environmental Protection Agency. National Recommended Water Quality Criteria Aquatic Life Criteria Table. March 2025. Accessed from: https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table.
- 60. United States Environmental Protection Agency Region 8. EPA Action on Revisions to Wyoming Water Quality Standards – Wyoming Environmental Quality Council Revisions Dated August 24, 1998 and March 7, 2000. Letter from Jack W. McGraw, Acting Regional Administrator to Acting Chairperson, Wyoming Environmental Quality Council. May 11, 2000.
- 61. United States Environmental Protection Agency. National Primary Drinking Water Regulations. EPA-816-F-09-004. May 2009. Accessed from: https://www.epa.gov/sites/default/files/2016-06/documents/npwdr_complete_table.pdf.
- 62. United States Environmental Protection Agency. Office of Water. Guidance Manual for Compliance with the Surface Water Treatment Rules: Turbidity Provisions. EPA 815-R-20_004. June 2020. Accessed from: https://www.epa.gov/sites/default/files/2020-06/documents/swtr_turbidity_gm_final_508.pdf
- 63. United States Environmental Protection Agency. Office of Water. Clean Water Act Financial Capability Assessment Guidance. 800B24001. March 2024. Accessed from: https://www.epa.gov/system/files/documents/2023-01/cwa-financial-capability-assessment-guidance.pdf
- 64. United States Environmental Protection Agency. National Recommended Water Quality Criteria Human Health Criteria Table. March 2025. Accessed from: https://www.epa.gov/wqc/national-recommended-water-quality-criteria-human-health-criteria-table.
- 65. United States Environmental Protection Agency. National Recommended Water Quality Criteria Organoleptic Effects. March 2025. Accessed from:

 https://www.epa.gov/wqc/national-recommended-water-quality-criteria-organoleptic-effects.
- 66. United States Environmental Protection Agency. National Secondary Drinking Water Regulations. February 2024. Accessed from: https://www.epa.gov/sdwa/secondary-drinking-water-standards-guidance-nuisance-chemicals#table-of-secondary.
- 67. Wyoming Department of Environmental Quality. Water Quality Division. Waterborne Pathogen Public Notification Process for Publicly Accessible Water Recreation Sites. April 14, 2023.

- 68. Federal Register 79318. Volume 45, Number 231. Environmental Protection Agency. Water Quality Criteria Documents; Availability. November 28, 1980. Accessed from: https://archives.federalregister.gov/issue_slice/1980/11/28/79272-79349.pdf#page=47.
- 69. Wyoming Department of Environmental Quality. Water Quality Division. Response to Comments Received During Scoping. April 2024.
- 70. Wyoming Department of Environmental Quality. Water Quality Division. Response to Comments Received During Water and Waste Advisory Board and Comment Period, June 13, 2024. October 2024.
- 71. Wyoming Department of Environmental Quality. Water Quality Division. Response to Comments for Comment Period Ending November 15, 2024. December 2024.
- 72. Wyoming Department of Environmental Quality. Water Quality Division. Response to Comments Receiving During December 12, 2024, Water and Waste Advisory Board Meeting. March 2025.
- 73. Wyoming Department of Environmental Quality. Water Quality Division. Proposed revisions to Chapter 1, clean copy. February 2025.
- 74. Wyoming Department of Environmental Quality. Water Quality Division. Proposed revisions to Chapter 2, strike and underline copy. February 2025.
- 75. Wyoming Department of Environmental Quality. Water Quality Division. Proposed revisions to Chapter 2, clean copy. February 2025.
- 76. Wyoming Department of Environmental Quality. Water Quality Division. Statement of Principal Reasons for Adoption. February 2025.
- 77. Wyoming Department of Environmental Quality. Water Quality Division. Supplementary Guidance to the Statement of Principal Reasons. February 2025.
- 78. Wyoming Department of Environmental Quality. Water Quality Division. Wyoming Surface Water Designations, strike and underline copy. February 2025.
- 79. Wyoming Department of Environmental Quality. Water Quality Division. Wyoming Surface Water Designations, clean copy. February 2025.
- 80. Wyoming Department of Environmental Quality. Water Quality Division. Wyoming Recreation Designated Uses Web Map. February 2025
- 81. Wyoming Department of Environmental Quality, Water Quality Division. Takings Analysis. February 2025.
- 82. Attorney General Statutory Authority Review, Proposed Chapters 1 and 2; Abigail Boudewyns Signer; February 18, 2025.
- 83. Governor's Permission to Proceed, Kit Wendtland, March 12, 2025.
- 84. Memorandum signed by Todd Parfitt, "Hearing Request for Water Quality Rules Chapters 1 and 2," March 24, 2025, Wyoming Department of Environmental Quality, Water Quality Division.
- 85. Wyoming Department of Environmental Quality. Water Quality Division. Proposed Changes to Water Quality Rules, Chapter 1, Wyoming Surface Water Quality Standards, Informational Webinar Presented to the Water and Wastewater Advisory Board. April 30, 2024.
- 86. Wyoming Department of Environmental Quality. Water Quality Division. Proposed Changes to Water Quality Rules, Chapter 1, Wyoming Surface Water Quality Standards,

- and Chapter 2, Permit Regulations for Discharges to Wyoming Surface Waters, Informational Webinar Presented to the Water and Wastewater Advisory Board. October 30, 2024.
- 87. Wyoming Department of Environmental Quality. Water Quality Division. Proposed Changes to Water Quality Rules, Chapter 1, Wyoming Surface Water Quality Standards, and Chapter 2, Permit Regulations for Discharges to Wyoming Surface Waters, Informational Briefing Presented to the Environmental Quality Council. March 19, 2025.

All of the documents listed above are available for review upon request at the Department of Environmental Quality, Water Quality Division's Cheyenne office, located at 200 W. 17th St. Cheyenne, WY 82002.

1. If you would like to arrange to review the documents in person, please contact Gina Thompson at gina.thompson@wyo.gov or at (307) 777-7343