



Wyoming Surface Water Quality Standards

Background

Triennial Review Stakeholder Group
March 11, 2021

Outline

- Surface Water Quality Standards Triennial Review and Rule Revision Process
- Introduction to Standards and Regulatory Requirements



Surface Water Quality Standards

Wyoming Administrative Rules

Environmental Quality, Dept. of
Water Quality

Chapter 1: Wyoming Surface Water Quality Standards

Effective Date: 04/24/2018 to Current

Rule Type: Current Rules & Regulations

Reference Number: 020.0011.1.04242018

Water Quality Rules and Regulations

Generated 04/30/2018

- Chapter 1 of Water Quality Rules and Regulations
- Last revised in 2018
- Accessed via [Secretary of State's Rule Database](#)

Surface Water Quality Standards

Section 1.	Authority	1
Section 2.	Definitions	1
Section 3.	Water Uses	8
Section 4.	Surface Water Classes and Uses	9
Section 5.	Standards Enforcement	12
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13
Section 7.	Class 1 Waters	13
Section 8.	Antidegradation	13
Section 9.	Mixing Zones	14
Section 10.	Testing Procedures	14
Section 11.	Flow Conditions	15
Section 12.	Protection of Wetlands	15
Section 13.	Toxic Materials	16
Section 14.	Dead Animals and Solid Waste	16
Section 15.	Settleable Solids	16
Section 16.	Floating and Suspended Solids	16
Section 17.	Taste, Odor and Color	16
Section 18.	Human Health	17
Section 19.	Industrial Water Supply	17
Section 20.	Agricultural Water Supply	17
Section 21.	Protection of Aquatic Life	17
Section 22.	Radioactive Material	19
Section 23.	Turbidity	19
Section 24.	Dissolved Oxygen	20
Section 25.	Temperature	20
Section 26.	pH	21
Section 27.	<i>E.coli</i> Bacteria	21
Section 28.	Undesirable Aquatic Life	22
Section 29.	Oil and Grease	22

Section 30.	Total Dissolved Gases	22
Section 31.	Colorado Basin Salinity	22
Section 32.	Biological Criteria	22
Section 33.	Reclassifications and Site-Specific Criteria	22
Section 34.	Use Attainability Analysis	23
Section 35.	Credible Data	24
Section 36.	Effluent Dependent Criteria	25
Section 37.	Discharger Specific Variance	26
Appendix A.	Wyoming Surface Water Classifications	A-1
Appendix B.	Water Quality Criteria	B-1
Appendix C.	Ammonia Toxicity Criteria	C-1
Appendix D.	Dissolved Oxygen Criteria	D-1
Appendix E.	References to Develop Site-Specific Criteria and Bioassays	E-1
Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals	F-1
Appendix G.	Equations For pH Dependent Parameters	G-1

37 Sections
7 Appendices

Surface Water Quality Standards

- Effluent limitations for point source discharges
 - WYPDES
 - Clean Water Act Section 401 Certifications
- Best management practices for nonpoint sources

Point Source Pollution

Discernible, confined, and discrete

Examples:

- Pipes, ditches, channels
- Containers, floating vessels
- Concentrated animal feeding operations

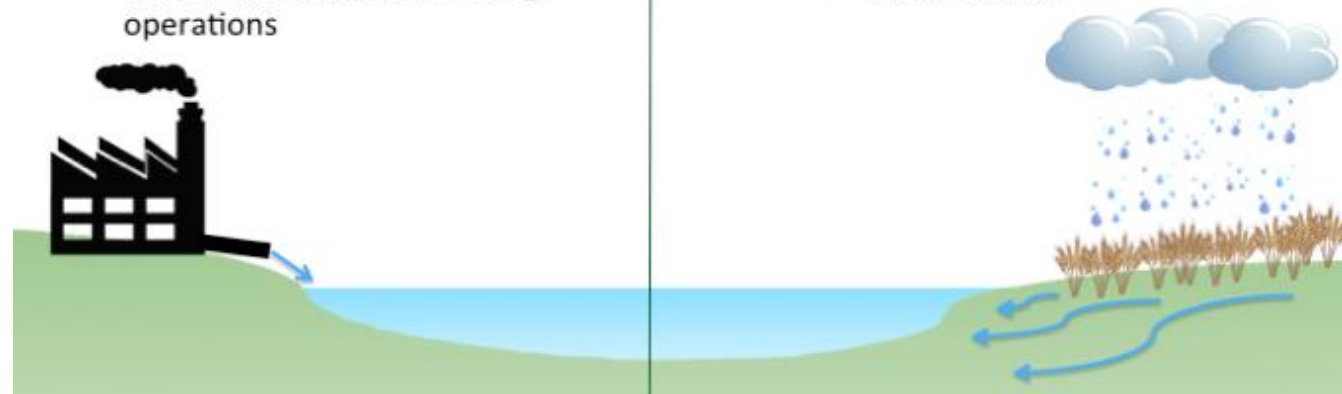


Nonpoint Source Pollution

Spread over a wide area from uncontrolled sources

Examples:

- Agricultural Runoff
- Industrial Runoff
- Urban Runoff



Surface Water Quality Standards

- Evaluate whether surface water quality standards are being met
 - If met, standards can be used for protection planning
 - If not being met, standards are used for restoration planning

Wyoming's 2020 Integrated 305(b) and 303(d) Report

Final



Wyoming Department of Environmental Quality - Water Quality Division

May 4, 2020

Surface Water Quality Standards

- Effluent limitations for point source discharges
 - WYPDES
 - Clean Water Act Section 401 Certifications
- Best management practices for nonpoint sources

Point Source Pollution

Discernible, confined, and discrete

Examples:

- Pipes, ditches, channels
- Containers, floating vessels
- Concentrated animal feeding operations



Nonpoint Source Pollution

Spread over a wide area from uncontrolled sources

Examples:

- Agricultural Runoff
- Industrial Runoff
- Urban Runoff



Triennial Review

Triennial Review of Wyoming's Surface Water Quality Standards

Initial Scoping

August 2018

Prepared by:
Wyoming Department of Environmental Quality
Water Quality Division
Watershed Protection Program



- Initial scoping conducted in August - October 2018



Rule Revision Process

1. Scoping

Comment and Response

2. Water and Waste Advisory Board

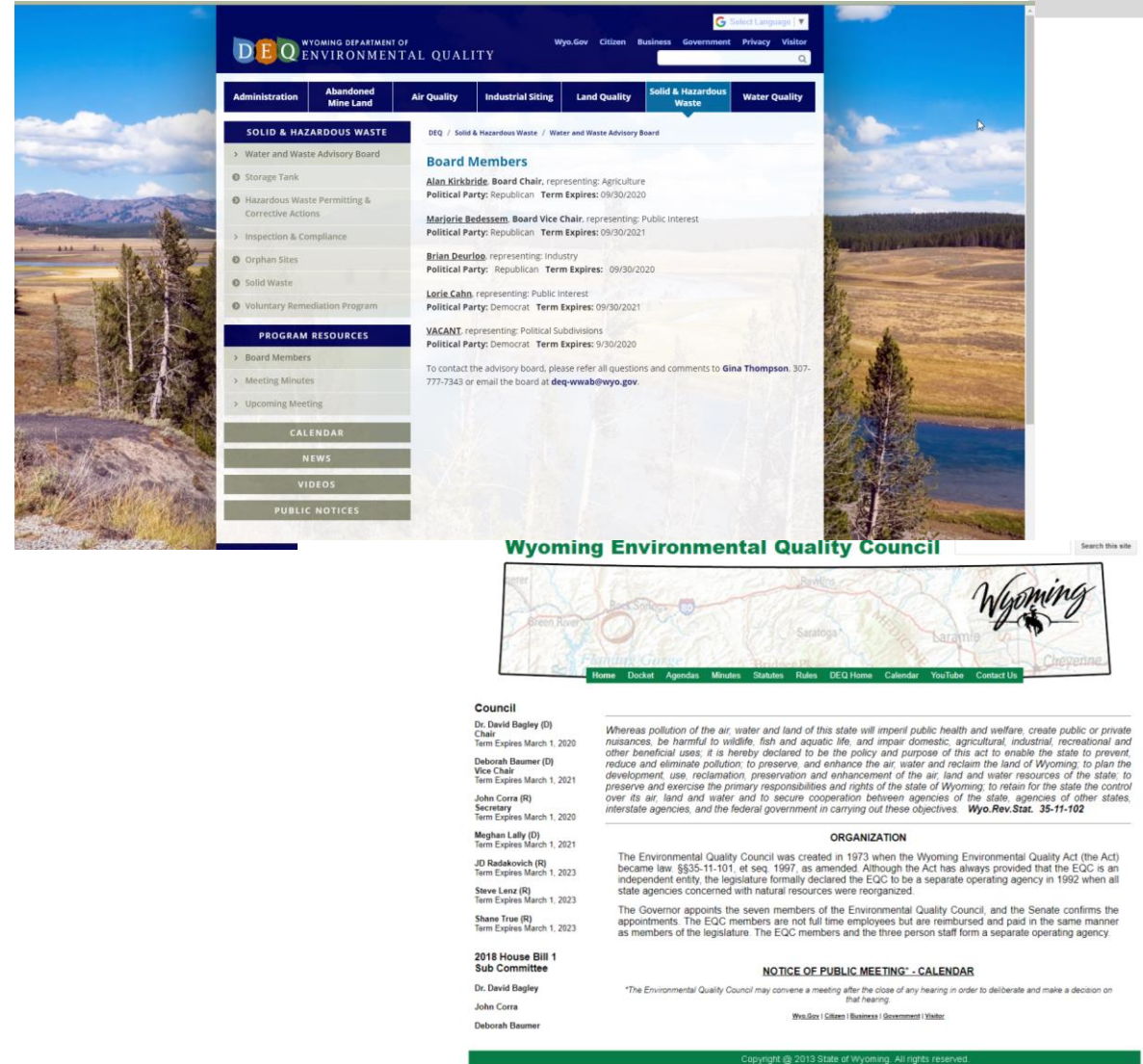
Comment and Response

3. Environmental Quality Council

Comment and Response

4. Governor

5. Environmental Protection Agency



The screenshot displays the Wyoming Department of Environmental Quality (DEQ) website. The top navigation bar includes links for Administration, Abandoned Mine Land, Air Quality, Industrial Siting, Land Quality, Solid & Hazardous Waste (selected), and Water Quality. The main content area is divided into two columns. The left column lists program resources under the Solid & Hazardous Waste section, including the Water and Waste Advisory Board, Storage Tank, Hazardous Waste Permitting & Corrective Actions, Inspection & Compliance, Orphan Sites, Solid Waste, and Voluntary Remediation Program. The right column features a list of Board Members, including Alan Kirkbride (Board Chair), Marjorie Bedessem (Board Vice Chair), Brian Dearlo, Lorie Cahn, and VACANT. Below the board members, contact information for Gina Thompson is provided. The bottom section of the screenshot shows the Wyoming Environmental Quality Council page, which includes a map of Wyoming and a list of council members.

Wyoming Environmental Quality Council

Council

Dr. David Bagley (D)
Chair
Term Expires March 1, 2020

Deborah Baumer (D)
Vice Chair
Term Expires March 1, 2021

John Corra (R)
Secretary
Term Expires March 1, 2020

Meghan Lally (D)
Term Expires March 1, 2021

JD Radakovich (R)
Term Expires March 1, 2023

Steve Lenz (R)
Term Expires March 1, 2023

Shane True (R)
Term Expires March 1, 2023

**2018 House Bill 1
Sub Committee**

Dr. David Bagley
John Corra
Deborah Baumer

ORGANIZATION

The Environmental Quality Council was created in 1973 when the Wyoming Environmental Quality Act (the Act) became law §§35-11-101, et seq. 1997, as amended. Although the Act has always provided that the EQC is an independent entity, the legislature formally declared the EQC to be a separate operating agency in 1992 when all state agencies concerned with natural resources were reorganized.

The Governor appoints the seven members of the Environmental Quality Council, and the Senate confirms the appointments. The EQC members are not full time employees but are reimbursed and paid in the same manner as members of the legislature. The EQC members and the three person staff form a separate operating agency.

NOTICE OF PUBLIC MEETING - CALENDAR

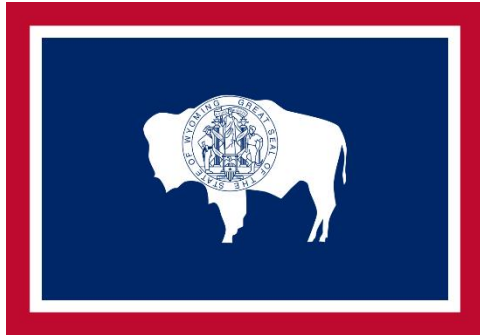
"The Environmental Quality Council may convene a meeting after the close of any hearing in order to deliberate and make a decision on that hearing."

Who: DEQ / Citizens / Business / Government / Visitor

Copyright © 2013 State of Wyoming. All rights reserved.

Surface Water Quality Standards

Wyoming Environmental Quality Act



Federal Clean Water Act



Wyoming Administrative Rules

Environmental Quality, Dept. of Water Quality

Chapter 1: Wyoming Surface Water Quality Standards

Effective Date: 04/24/2018 to Current

Rule Type: Current Rules & Regulations

Reference Number: 020.0011.1.04242018

Generated 04/30/2018

Surface Water Quality Standards



**Surface Water Quality
Standards**



Designated Uses

Antidegradation

Water Quality Criteria

Surface Water Quality Standards



Designated Uses



Implementation



Antidegradation

Water Quality Criteria

Surface Water Quality Standards



Designated Uses

Water Quality Criteria



Implementation



Antidegradation

Designated Uses



- Uses specified in the water quality standards, even though they may not currently be attained



South Fork Shoshone River



Recreation



Aquatic Life



Drinking Water

Scenic Value

Designated Uses: Clean Water Act



40 CFR 131.2 and 131.10

- Must designate all waters for swimmable and fishable uses (primary contact recreation, aquatic life, fish consumption)

Designated Uses: Clean Water Act

40 CFR 131.2 and 131.10



- Consider use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation

Designated Uses: Clean Water Act



40 CFR 131.2 and 131.10

- Take into consideration the water quality standards of downstream waters
- Can adopt subcategories of designated uses to reflect varying needs (e.g., warmwater fisheries, coldwater fisheries)
- Can adopt seasonal uses

Designated Uses: Clean Water Act



40 CFR 131.2 and 131.10

- May remove or modify fishable swimmable uses
 - Cannot remove an existing use
 - Must complete a use attainability analysis to demonstrate that the use is not attainable based on one of six factors
 - Must designate the *highest attainable use

*Highest attainable use is the use that can be achieved after imposing technology based effluent limits for point sources and cost-effective and reasonable best management practices for nonpoint source

Designated Uses: Wyoming

Section 1.	Authority	1		
Section 2.	Definitions	1		
→ Section 3.	Water Uses	8		
→ Section 4.	Surface Water Classes and Uses	9		
Section 5.	Standards Enforcement	12		
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13		
Section 7.	Class 1 Waters	13		
Section 8.	Antidegradation	13		
Section 9.	Mixing Zones	14		
Section 10.	Testing Procedures	14		
Section 11.	Flow Conditions	15		
Section 12.	Protection of Wetlands	15		
Section 13.	Toxic Materials	16		
Section 14.	Dead Animals and Solid Waste	16		
Section 15.	Settleable Solids	16		
Section 16.	Floating and Suspended Solids	16		
Section 17.	Taste, Odor and Color	16		
Section 18.	Human Health	17		
Section 19.	Industrial Water Supply	17		
Section 20.	Agricultural Water Supply	17		
Section 21.	Protection of Aquatic Life	17		
Section 22.	Radioactive Material	19		
Section 23.	Turbidity	19		
Section 24.	Dissolved Oxygen	20		
Section 25.	Temperature	20		
Section 26.	pH	21		
Section 27.	<i>E.coli</i> Bacteria	21		
Section 28.	Undesirable Aquatic Life	22		
Section 29.	Oil and Grease	22		
			Section 30.	Total Dissolved Gases
			Section 31.	Colorado Basin Salinity
			Section 32.	Biological Criteria
			Section 33.	Reclassifications and Site-Specific Criteria
			Section 34.	Use Attainability Analysis
			Section 35.	Credible Data
			Section 36.	Effluent Dependent Criteria
			Section 37.	Discharger Specific Variance
			Appendix A.	Wyoming Surface Water Classifications
			Appendix B.	Water Quality Criteria
			Appendix C.	Ammonia Toxicity Criteria
			Appendix D.	Dissolved Oxygen Criteria
			Appendix E.	References to Develop Site-Specific Criteria and Bioassays
			Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals
			Appendix G.	Equations For pH Dependent Parameters

Designated Uses: Wyoming

13

	Drinking Water	Game Fish	Non-Game Fish	Fish Consumption	Other Aquatic Life	Recreation	Wildlife	Agriculture	Industry	Scenic Value
1*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2AB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2A	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
2B	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2C	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2D	No	When Present	When Present	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3A	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3B	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3C	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3D	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
4A	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
4B	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
4C	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes

Classification System/Designated Uses

13

	Drinking Water	Cold Water Game Fish Warm Water	Non-Game Fish	Fish Consumption	Other Aquatic Life	Primary Contact Recreation Secondary Contact	Wildlife	Agriculture	Industry	Scenic Value
1*	Yes	CW Yes WW	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2AB	Yes	CW Yes WW	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2A	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
2B	No	CW Yes WW	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2C	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2D	No	When Present	When Present	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3A	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3B	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3C	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3D	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
4A	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
4B	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
4C	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes

Designated Uses: Wyoming

WYOMING SURFACE WATER CLASSIFICATION LIST



Water Quality Division
Surface Water Standards

June 21, 2001
Updated March 26, 2020

Designated Uses: Wyoming

WYOMING SURFACE WATER CLASSIFICATION LIST



Water Quality Division
Surface Water Standards

June 21, 2001
Updated March 26, 2020

BELLE FOURCHE DRAINAGE

BELLE FOURCHE R 2ABWW				
	OWL CR 3B			
	CROW CR 3B			
		BULL CR 3B		
		CHICAGO CR 3B		
	MIDDLE CR 3B			
	HAY CR 3B			
		N FK HAY CR 3B		
		S FK HAY CR 3B		
	REDWATER CR 2AB			
		SAND CR (ABOVE HWY 14) 1		
		SAND CR (REMAINDER) 2AB		
			COLD SPRINGS CR 2AB	
				LOST CANYON CR 3B
			RED CANYON CR 3B	
			SPOTTED TAIL CR 2AB	
		S REDWATER CR 2AB		
			SUNDANCE CR (AB FAIR GROUND POND) 2AB	
			SUNDANCE CR (BL FAIR GROUND POND) 3B	
			ROCKY FORD CR 3B	
	OAK CR 3B			
		ALUM CR 3B		
	KILPATRICK CR 3B			
	PINE CR 3B			
		DEEP CR 3B		
	HORSE CR 3B			
	SPRING CR 3B			
	BOGGY CR 3B			
	BRUSHY CR 3B			
	DEER CR 3B			
	SOURDOUGH CR 3B			
	BLACKTAIL CR 2AB			

Designated Uses: Wyoming

Section 1.	Authority	1	
Section 2.	Definitions	1	
→ Section 3.	Water Uses	8	
→ Section 4.	Surface Water Classes and Uses	9	
Section 5.	Standards Enforcement	12	
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13	
Section 7.	Class 1 Waters	13	
Section 8.	Antidegradation	13	
Section 9.	Mixing Zones	14	
Section 10.	Testing Procedures	14	
Section 11.	Flow Conditions	15	
Section 12.	Protection of Wetlands	15	
Section 13.	Toxic Materials	16	
Section 14.	Dead Animals and Solid Waste	16	
Section 15.	Settleable Solids	16	
Section 16.	Floating and Suspended Solids	16	
Section 17.	Taste, Odor and Color	16	
Section 18.	Human Health	17	
Section 19.	Industrial Water Supply	17	
Section 20.	Agricultural Water Supply	17	
Section 21.	Protection of Aquatic Life	17	
Section 22.	Radioactive Material	19	
Section 23.	Turbidity	19	
Section 24.	Dissolved Oxygen	20	
Section 25.	Temperature	20	
Section 26.	pH	21	
Section 27.	<i>E.coli</i> Bacteria	21	
Section 28.	Undesirable Aquatic Life	22	
Section 29.	Oil and Grease	22	
Section 30.	Total Dissolved Gases	22	
Section 31.	Colorado Basin Salinity	22	
Section 32.	Biological Criteria	22	
Section 33.	Reclassifications and Site-Specific Criteria	22	
Section 34.	Use Attainability Analysis	23	
Section 35.	Credible Data	24	
Section 36.	Effluent Dependent Criteria	25	
Section 37.	Discharger Specific Variance	26	
→ Appendix A.	Wyoming Surface Water Classifications	A-1	
Appendix B.	Water Quality Criteria	B-1	
Appendix C.	Ammonia Toxicity Criteria	C-1	
Appendix D.	Dissolved Oxygen Criteria	D-1	
Appendix E.	References to Develop Site-Specific Criteria and Bioassays	E-1	
Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals	F-1	
Appendix G.	Equations For pH Dependent Parameters	G-1	

Designated Uses: Wyoming

Section 1.	Authority	1			
Section 2.	Definitions	1			
→ Section 3.	Water Uses	8			
→ Section 4.	Surface Water Classes and Uses	9			
Section 5.	Standards Enforcement	12			
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13			
Section 7.	Class 1 Waters	13			
Section 8.	Antidegradation	13			
Section 9.	Mixing Zones	14			
Section 10.	Testing Procedures	14			
Section 11.	Flow Conditions	15			
Section 12.	Protection of Wetlands	15			
Section 13.	Toxic Materials	16			
Section 14.	Dead Animals and Solid Waste	16			
Section 15.	Settleable Solids	16			
Section 16.	Floating and Suspended Solids	16			
Section 17.	Taste, Odor and Color	16			
Section 18.	Human Health	17			
Section 19.	Industrial Water Supply	17			
Section 20.	Agricultural Water Supply	17			
Section 21.	Protection of Aquatic Life	17			
Section 22.	Radioactive Material	19			
Section 23.	Turbidity	19			
Section 24.	Dissolved Oxygen	20			
Section 25.	Temperature	20			
Section 26.	pH	21			
Section 27.	<i>E.coli</i> Bacteria	21			
Section 28.	Undesirable Aquatic Life	22			
Section 29.	Oil and Grease	22			
			Section 30.	Total Dissolved Gases	22
			Section 31.	Colorado Basin Salinity	22
			Section 32.	Biological Criteria	22
		→	Section 33.	Reclassifications and Site-Specific Criteria	22
		→	Section 34.	Use Attainability Analysis	23
			Section 35.	Credible Data	24
			Section 36.	Effluent Dependent Criteria	25
		→	Section 37.	Discharger Specific Variance	26
		→	Appendix A.	Wyoming Surface Water Classifications	A-1
			Appendix B.	Water Quality Criteria	B-1
			Appendix C.	Ammonia Toxicity Criteria	C-1
			Appendix D.	Dissolved Oxygen Criteria	D-1
			Appendix E.	References to Develop Site-Specific Criteria and Bioassays	E-1
			Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals	F-1
			Appendix G.	Equations For pH Dependent Parameters	G-1

Surface Water Quality Standards



Designated Uses



Implementation



Antidegradation

Water Quality Criteria

Water Quality Criteria

- Concentrations of pollutants or narrative statements to protect designated uses



Water Quality Criteria: Clean Water Act

40 CFR 131.11

- Water quality criteria must protect the designated use



Water Quality Criteria: Clean Water Act

40 CFR 131.11

- Water quality criteria can be based on
 - Clean Water Act Section 304(a) guidance*

*criteria for water quality that reflect the latest scientific knowledge



Water Quality Criteria: Clean Water Act

40 CFR 131.11

- Water quality criteria can be based on
 - 304(a) guidance modified to reflect site-specific conditions



Water Quality Criteria: Clean Water Act

40 CFR 131.11

- Water quality criteria can be based on
 - Other scientifically defensible methods



Water Quality Criteria: Clean Water Act

40 CFR 131.11


- Water quality criteria can be
 - narrative criteria or criteria based on biomonitoring methods where numerical criteria cannot be established or to supplement numeric criteria



Water Quality Criteria: Wyoming

Section 1.	Authority	1				
Section 2.	Definitions	1				
Section 3.	Water Uses	8				
Section 4.	Surface Water Classes and Uses	9				
Section 5.	Standards Enforcement	12				
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13				
Section 7.	Class 1 Waters	13				
Section 8.	Antidegradation	13				
Section 9.	Mixing Zones	14				
Section 10.	Testing Procedures	14				
Section 11.	Flow Conditions	15				
Section 12.	Protection of Wetlands	15				
Section 13.	Toxic Materials	16				
Section 14.	Dead Animals and Solid Waste	16				
Section 15.	Settleable Solids	16	→	Section 30.	Total Dissolved Gases	22
Section 16.	Floating and Suspended Solids	16	→	Section 31.	Colorado Basin Salinity	22
Section 17.	Taste, Odor and Color	16	→	Section 32.	Biological Criteria	22
Section 18.	Human Health	17	→	Section 33.	Reclassifications and Site-Specific Criteria	22
Section 19.	Industrial Water Supply	17	→	Section 34.	Use Attainability Analysis	23
Section 20.	Agricultural Water Supply	17	→	Section 35.	Credible Data	24
Section 21.	Protection of Aquatic Life	17	→	Section 36.	Effluent Dependent Criteria	25
Section 22.	Radioactive Material	19	→	Section 37.	Discharger Specific Variance	26
Section 23.	Turbidity	19	→	Appendix A.	Wyoming Surface Water Classifications	A-1
Section 24.	Dissolved Oxygen	20	→	Appendix B.	Water Quality Criteria	B-1
Section 25.	Temperature	20	→	Appendix C.	Ammonia Toxicity Criteria	C-1
Section 26.	pH	21	→	Appendix D.	Dissolved Oxygen Criteria	D-1
Section 27.	<i>E.coli</i> Bacteria	21	→	Appendix E.	References to Develop Site-Specific Criteria and Bioassays	E-1
Section 28.	Undesirable Aquatic Life	22	→	Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals	F-1
Section 29.	Oil and Grease	22	→	Appendix G.	Equations For pH Dependent Parameters	G-1







Water Quality Criteria: Wyoming

Section 1.	Authority	1
Section 2.	Definitions	1
Section 3.	Water Uses	8
Section 4.	Surface Water Classes and Uses	9
Section 5.	Standards Enforcement	12
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13
Section 7.	Class 1 Waters	13
Section 8.	Antidegradation	13
Section 9.	Mixing Zones	14
Section 10.	Testing Procedures	14
Section 11.	Flow Conditions	15
Section 12.	Protection of Wetlands	15
→ Section 13.	Toxic Materials	16
→ Section 14.	Dead Animals and Solid Waste	16
→ Section 15.	Settleable Solids	16
→ Section 16.	Floating and Suspended Solids	16
→ Section 17.	Taste, Odor and Color	16
→ Section 18.	Human Health	17
→ Section 19.	Industrial Water Supply	17
→ Section 20.	Agricultural Water Supply	17
→ Section 21.	Protection of Aquatic Life	17
→ Section 22.	Radioactive Material	19
→ Section 23.	Turbidity	19
→ Section 24.	Dissolved Oxygen	20
→ Section 25.	Temperature	20
→ Section 26.	pH	21
→ Section 27.	<i>E.coli</i> Bacteria	21
→ Section 28.	Undesirable Aquatic Life	22
→ Section 29.	Oil and Grease	22

→ Section 30.	Total Dissolved Gases	22
Section 31.	Colorado Basin Salinity	22
→ Section 32.	Biological Criteria	22
Section 33.	Reclassifications and Site-Specific Criteria	22
Section 34.	Use Attainability Analysis	23
Section 35.	Credible Data	24
Section 36.	Effluent Dependent Criteria	25
Section 37.	Discharger Specific Variance	26
Appendix A.	Wyoming Surface Water Classifications	A-1
→ Appendix B.	Water Quality Criteria	B-1
→ Appendix C.	Ammonia Toxicity Criteria	C-1
→ Appendix D.	Dissolved Oxygen Criteria	D-1
Appendix E.	References to Develop Site-Specific Criteria and Bioassays	E-1
→ Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals	F-1
→ Appendix G.	Equations For pH Dependent Parameters	G-1



Water Quality Criteria: Wyoming

Section 1.	Authority	1		Section 30.	Total Dissolved Gases	22
Section 2.	Definitions	1		Section 31.	Colorado Basin Salinity	22
Section 3.	Water Uses	8		Section 32.	Biological Criteria	22
Section 4.	Surface Water Classes and Uses	9		Section 33.	Reclassifications and Site-Specific Criteria	22
Section 5.	Standards Enforcement	12		Section 34.	Use Attainability Analysis	23
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13		Section 35.	Credible Data.....	24
Section 7.	Class 1 Waters	13		Section 36.	Effluent Dependent Criteria.....	25
Section 8.	Antidegradation	13		Section 37.	Discharger Specific Variance	26
Section 9.	Mixing Zones	14		Appendix A.	Wyoming Surface Water Classifications	A-1
Section 10.	Testing Procedures	14		Appendix B.	Water Quality Criteria	B-1
Section 11.	Flow Conditions	15		Appendix C.	Ammonia Toxicity Criteria	C-1
Section 12.	Protection of Wetlands	15		Appendix D.	Dissolved Oxygen Criteria.....	D-1
Section 13.	Toxic Materials.....	16	→	Appendix E.	References to Develop Site-Specific Criteria and Bioassays	E-1
Section 14.	Dead Animals and Solid Waste.....	16	→	Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals	F-1
Section 15.	Settleable Solids.....	16	→	Appendix G.	Equations For pH Dependent Parameters.....	G-1
Section 16.	Floating and Suspended Solids	16	→			
Section 17.	Taste, Odor and Color	16	→			
Section 18.	Human Health	17	→			
Section 19.	Industrial Water Supply	17	→			
Section 20.	Agricultural Water Supply.....	17	→			
Section 21.	Protection of Aquatic Life	17	→			
Section 22.	Radioactive Material.....	19	→			
Section 23.	Turbidity	19	→			
Section 24.	Dissolved Oxygen	20	→			
Section 25.	Temperature	20	→			
Section 26.	pH	21	→			
Section 27.	<i>E.coli</i> Bacteria.....	21	→			
Section 28.	Undesirable Aquatic Life.....	22	→			
Section 29.	Oil and Grease	22	→			



Surface Water Quality Standards



Designated Uses



Implementation



Antidegradation

Water Quality Criteria

Antidegradation

- Provisions to maintain and protect water uses and water quality
- Provide for lowering of water quality in certain circumstances



Restore
and
Maintain
Water
Quality

Antidegradation: Clean Water Act

40 CFR 131.12

- Develop an antidegradation policy [rules]



Antidegradation: Clean Water Act

40 CFR 131.12

- Existing Use Protection: Existing uses and level of water quality necessary to protect existing uses shall be maintained and protected



Antidegradation: Clean Water Act

40 CFR 131.12

- High Quality Waters: Where water quality exceeds levels necessary to support fishable and swimmable uses, the water quality shall be maintained and protected, unless.....



...the State finds, after intergovernmental coordination and public participation, that allowing lower water quality is necessary to accommodate important economic or social development in the area

Tier 2

Antidegradation: Clean Water Act

40 CFR 131.12

- Outstanding National Resource Waters: Water quality shall be maintained and protected



- Waters of exceptional recreational or ecological significance



Antidegradation: Clean Water Act

- States shall develop implementation methods that are consistent with the State's policy and federal regulations



- Provide an opportunity for public involvement during development and revision of the methods
- Make the methods available to the public

Antidegradation: Wyoming

Section 1.	Authority	1
Section 2.	Definitions	1
Section 3.	Water Uses	8
Section 4.	Surface Water Classes and Uses	9
Section 5.	Standards Enforcement	12
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13
Section 7.	Class 1 Waters	13
Section 8.	Antidegradation	13
Section 9.	Mixing Zones	14
Section 10.	Testing Procedures	14
Section 11.	Flow Conditions	15
Section 12.	Protection of Wetlands	15
Section 13.	Toxic Materials	16
Section 14.	Dead Animals and Solid Waste	16
Section 15.	Settleable Solids	16
Section 16.	Floating and Suspended Solids	16
Section 17.	Taste, Odor and Color	16
Section 18.	Human Health	17
Section 19.	Industrial Water Supply	17
Section 20.	Agricultural Water Supply	17
Section 21.	Protection of Aquatic Life	17
Section 22.	Radioactive Material	19
Section 23.	Turbidity	19
Section 24.	Dissolved Oxygen	20
Section 25.	Temperature	20
Section 26.	pH	21
Section 27.	<i>E.coli</i> Bacteria	21
Section 28.	Undesirable Aquatic Life	22
Section 29.	Oil and Grease	22

Section 30.	Total Dissolved Gases	22
Section 31.	Colorado Basin Salinity	22
Section 32.	Biological Criteria	22
Section 33.	Reclassifications and Site-Specific Criteria	22
Section 34.	Use Attainability Analysis	23
Section 35.	Credible Data	24
Section 36.	Effluent Dependent Criteria	25
Section 37.	Discharger Specific Variance	26
Appendix A.	Wyoming Surface Water Classifications	A-1
Appendix B.	Water Quality Criteria	B-1
Appendix C.	Ammonia Toxicity Criteria	C-1
Appendix D.	Dissolved Oxygen Criteria	D-1
Appendix E.	References to Develop Site-Specific Criteria and Bioassays	E-1
Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals	F-1
Appendix G.	Equations For pH Dependent Parameters	G-1



Antidegradation: Wyoming

Section 1.	Authority	1
Section 2.	Definitions	1
Section 3.	Water Uses	8
→ Section 4.	Surface Water Classes and Uses	9
Section 5.	Standards Enforcement	12
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13
→ Section 7.	Class 1 Waters	13
→ Section 8.	Antidegradation	13
Section 9.	Mixing Zones	14
Section 10.	Testing Procedures	14
Section 11.	Flow Conditions	15
Section 12.	Protection of Wetlands	15
Section 13.	Toxic Materials	16
Section 14.	Dead Animals and Solid Waste	16
Section 15.	Settleable Solids	16
Section 16.	Floating and Suspended Solids	16
Section 17.	Taste, Odor and Color	16
Section 18.	Human Health	17
Section 19.	Industrial Water Supply	17
Section 20.	Agricultural Water Supply	17
Section 21.	Protection of Aquatic Life	17
Section 22.	Radioactive Material	19
Section 23.	Turbidity	19
Section 24.	Dissolved Oxygen	20
Section 25.	Temperature	20
Section 26.	pH	21
Section 27.	<i>E.coli</i> Bacteria	21
Section 28.	Undesirable Aquatic Life	22
Section 29.	Oil and Grease	22

Section 30.	Total Dissolved Gases	22
Section 31.	Colorado Basin Salinity	22
Section 32.	Biological Criteria	22
Section 33.	Reclassifications and Site-Specific Criteria	22
Section 34.	Use Attainability Analysis	23
Section 35.	Credible Data	24
Section 36.	Effluent Dependent Criteria	25
Section 37.	Discharger Specific Variance	26
→ Appendix A.	Wyoming Surface Water Classifications	A-1
Appendix B.	Water Quality Criteria	B-1
Appendix C.	Ammonia Toxicity Criteria	C-1
Appendix D.	Dissolved Oxygen Criteria	D-1
Appendix E.	References to Develop Site-Specific Criteria and Bioassays	E-1
Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals	F-1
Appendix G.	Equations For pH Dependent Parameters	G-1



Antidegradation: Wyoming

Wyoming Surface Water Quality Standards



Implementation Policies for

Antidegradation
Mixing Zones and Dilution Allowances
Turbidity
Use Attainability Analysis

Effective September 24, 2013

- Antidegradation Policy:
Antidegradation Implementation
Methods



Antidegradation: Wyoming



**Interim Policy on Establishing Effluent Limits for
Permitted Point Source Discharges to Class 1 Water
Tributaries**

August 2, 2007

- Class 1 Interim Policy:
Antidegradation Implementation
Methods



Surface Water Quality Standards



Designated Uses



Implementation



Antidegradation

Water Quality Criteria

Implementation

- Provisions that affect the enforcement, application, and execution of surface water quality standards



Implementation: Clean Water Act

40 CFR 131.13

- States may adopt general policies [rules] into water quality standards that affect how the standards are applied and implemented
 - Mixing zones, low flows, variances (40 CFR 131.14)



Implementation: Wyoming

Section 1.	Authority	1
Section 2.	Definitions	1
Section 3.	Water Uses	8
Section 4.	Surface Water Classes and Uses	9
→ Section 5.	Standards Enforcement	12
Section 6.	Interstate Compacts, Court Decrees and Water Rights	13
Section 7.	Class 1 Waters	13
Section 8.	Antidegradation	13
→ Section 9.	Mixing Zones	14
→ Section 10.	Testing Procedures	14
→ Section 11.	Flow Conditions	15
Section 12.	Protection of Wetlands	15
Section 13.	Toxic Materials	16
Section 14.	Dead Animals and Solid Waste	16
Section 15.	Settleable Solids	16
Section 16.	Floating and Suspended Solids	16
Section 17.	Taste, Odor and Color	16
Section 18.	Human Health	17
Section 19.	Industrial Water Supply	17
Section 20.	Agricultural Water Supply	17
Section 21.	Protection of Aquatic Life	17
Section 22.	Radioactive Material	19
Section 23.	Turbidity	19
Section 24.	Dissolved Oxygen	20
Section 25.	Temperature	20
Section 26.	pH	21
Section 27.	<i>E.coli</i> Bacteria	21
Section 28.	Undesirable Aquatic Life	22
Section 29.	Oil and Grease	22

Section 30.	Total Dissolved Gases	22
Section 31.	Colorado Basin Salinity	22
Section 32.	Biological Criteria	22
Section 33.	Reclassifications and Site-Specific Criteria	22
Section 34.	Use Attainability Analysis	23
→ Section 35.	Credible Data	24
Section 36.	Effluent Dependent Criteria	25
→ Section 37.	Discharger Specific Variance	26
Appendix A.	Wyoming Surface Water Classifications	A-1
Appendix B.	Water Quality Criteria	B-1
Appendix C.	Ammonia Toxicity Criteria	C-1
Appendix D.	Dissolved Oxygen Criteria	D-1
Appendix E.	References to Develop Site-Specific Criteria and Bioassays	E-1
Appendix F.	Conversion Factors and Equations for Hardness Dependent Metals	F-1
Appendix G.	Equations For pH Dependent Parameters	G-1



Implementation: Wyoming

Wyoming Surface Water Quality Standards



Implementation Policies for

Antidegradation
Mixing Zones and Dilution Allowances
Turbidity
Use Attainability Analysis

Effective September 24, 2013

- Mixing Zones and Dilution Allowances



Surface Water Quality Standards



Designated Uses



Implementation



Antidegradation

Water Quality Criteria

Antidegradation: Clean Water Act

40 CFR 131.12

- High Quality Waters: Before allowing lowering of water quality, must complete an alternatives analysis



...to evaluate range of practicable alternatives that would prevent or lessen degradation associated with the proposed activity

Antidegradation: Clean Water Act

40 CFR 131.12

- High Quality Waters: Can be identified waterbody by waterbody or parameter by parameter



- If waterbody by waterbody, State shall provide public involvement
- Cannot exclude waterbody from protections if water quality does not support all the fishable swimmable uses **Tier 2**