

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION**

5 CCR 1002-38

**REGULATION NO. 38
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
SOUTH PLATTE RIVER BASIN, LARAMIE RIVER BASIN
REPUBLICAN RIVER BASIN, SMOKY HILL RIVER BASIN**

**APPENDIX 38-1
Stream Classifications and Water Quality Standards Tables**

Effective 04/30/2024

Abbreviations and Acronyms

Aq	=	Aquatic
°C	=	degrees Celsius
CL	=	cold lake temperature tier
CLL	=	cold large lake temperature tier
CS-I	=	cold stream temperature tier one
CS-II	=	cold stream temperature tier two
D.O.	=	dissolved oxygen
DM	=	daily maximum temperature
DUWS	=	direct use water supply
E. coli	=	<i>Escherichia coli</i>
EQ	=	existing quality
mg/L	=	milligrams per liter
mg/m ²	=	milligrams per square meter
mL	=	milliliter
MWAT	=	maximum weekly average temperature
OW	=	outstanding waters
SSE	=	site-specific equation
T	=	total recoverable
t	=	total
tr	=	trout
TVS	=	table value standard
µg/L	=	micrograms per liter
UP	=	use-protected
WS	=	water supply
WS-I	=	warm stream temperature tier one
WS-II	=	warm stream temperature tier two
WS-III	=	warm stream temperature tier three
WL	=	warm lake temperature tier

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

16d. Second Creek, including all tributaries, from the source to the O'Brian Canal at 39.898789, 104.817661.					
COSPUS16D	Classifications	Physical and Biological		Metals (ug/L)	
Designation	Agriculture Aq Life Warm 2 Recreation E	DM	MWAT	acute	chronic
UP		Temperature °C	WS-III	WS-III	Arsenic
		acute	chronic	Arsenic(T)	--- 100
Qualifiers:	D.O. (mg/L)	---	3.3*	Cadmium	TVS TVS
Other:	pH	6.5 - 9.0	---	Chromium III	TVS TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details. *D.O. (mg/L)(chronic) = 15th percentile of D.O. measurements collected between 6:30 a.m. and 6:30 p.m.	chlorophyll a (mg/m ²)	---	TVS	Chromium III(T)	--- 100
	E. coli (per 100 mL)	---	126	Chromium VI	TVS TVS
		Inorganic (mg/L)		Copper	TVS TVS
		acute	chronic	Iron(T)	--- 1000
	Ammonia	TVS	TVS	Lead	TVS TVS
	Boron	---	0.75	Manganese	TVS TVS
	Chloride	---	---	Mercury(T)	--- 0.01
	Chlorine	0.019	0.011	Molybdenum(T)	--- 150
	Cyanide	0.005	---	Nickel	TVS TVS
	Nitrate	100	---	Selenium	TVS TVS
	Nitrite	---	0.5	Silver	TVS TVS
	Phosphorus	---	TVS*	Uranium	varies* varies*
	Sulfate	---	---	Zinc	TVS TVS
	Sulfide	---	0.002		

16e. Third Creek, including all tributaries, from the source to the O'Brian Canal at 39.917346, -104.784028.					
COSPUS16E	Classifications	Physical and Biological		Metals (ug/L)	
Designation	Agriculture Aq Life Warm 2 Water Supply Recreation E	DM	MWAT	acute	chronic
UP		Temperature °C	WS-III	WS-III	Arsenic
		acute	chronic	Arsenic(T)	--- 0.02-10 ^A
Qualifiers:	D.O. (mg/L)	---	4.0*	Cadmium	TVS TVS
Other:	pH	6.5 - 9.0	---	Cadmium(T)	5.0 ---
*Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details. *D.O. (mg/L)(chronic) = 15th percentile of D.O. measurements collected between 6:30 a.m. and 6:30 p.m.	chlorophyll a (mg/m ²)	---	TVS	Chromium III	--- TVS
	E. coli (per 100 mL)	---	126	Chromium III(T)	50 ---
		Inorganic (mg/L)		Chromium VI	TVS TVS
		acute	chronic	Copper	TVS TVS
	Ammonia	TVS	TVS	Iron	--- WS
	Boron	---	0.75	Iron(T)	--- 1000
	Chloride	---	250	Lead	TVS TVS
	Chlorine	0.019	0.011	Lead(T)	50 ---
	Cyanide	0.005	---	Manganese	TVS TVS/WS
	Nitrate	10	---	Mercury(T)	--- 0.01
	Nitrite	---	0.5	Molybdenum(T)	--- 150
	Phosphorus	---	---	Nickel	TVS TVS
	Sulfate	---	WS	Nickel(T)	--- 100
	Sulfide	---	0.002	Selenium	TVS TVS
				Silver	TVS TVS
			Uranium	varies* varies*	
			Zinc	TVS TVS	

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

16f. Barr Lake Tributary, including all tributaries, from the source to the Denver Hudson Canal at 39.941142, -104.748387.							
COSPUS16F	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Warm 2 Recreation E		DM	MWAT		acute	chronic
UP		Temperature °C	WS-III	WS-III	Arsenic	340	---
Qualifiers:		acute	chronic	Arsenic(T)	---	100	
Other:	*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details. *D.O. (mg/L)(chronic) = When water is present, D.O. concentrations shall be maintained at levels that protect classified uses.	D.O. (mg/L)	---	narrative*	Cadmium	TVS	TVS
		pH	6.5 - 9.0	---	Chromium III	TVS	TVS
		chlorophyll a (mg/m ²)	---	TVS	Chromium III(T)	---	100
		E. coli (per 100 mL)	---	126	Chromium VI	TVS	TVS
		Inorganic (mg/L)			Copper	TVS	TVS
			acute	chronic	Iron(T)	---	1000
		Ammonia	TVS	TVS	Lead	TVS	TVS
		Boron	---	0.75	Manganese	TVS	TVS
		Chloride	---	---	Mercury(T)	---	0.01
		Chlorine	0.019	0.011	Molybdenum(T)	---	150
		Cyanide	0.005	---	Nickel	TVS	TVS
		Nitrate	100	---	Selenium	TVS	TVS
		Nitrite	---	0.5	Silver	TVS	TVS
		Phosphorus	---	TVS*	Uranium	varies*	varies*
		Sulfate	---	---	Zinc	TVS	TVS
	Sulfide	---	0.002				
16g. Marcy Gulch, including all wetlands from the source to the confluence with the South Platte.							
COSPUS16G	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Warm 2 Recreation E		DM	MWAT		acute	chronic
UP		Temperature °C	WS-II	WS-II	Arsenic	340	---
Qualifiers:		acute	chronic	Arsenic(T)	---	100	
Other:	Temporary Modification(s): temperature(MWAT) = current condition* Expiration Date of 12/31/2025 12/1 - 2/29 *Copper(acute) = Copper BLM-based FMB Cu FMB(ac)=67.1 ug/l below the Centennial WWTF. *Copper(chronic) = Copper BLM-based FMB Cu FMB(ch)=43.3 ug/l below the Centennial WWTF. *Selenium(acute) = See section 38.6(4)(b) for assessment locations. *Selenium(chronic) = See section 38.6(4)(b) for assessment locations. *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details. *TempMod: temperature(12/1 - 2/29) = downstream of Centennial WWTF. Adopted 6/8/2009	D.O. (mg/L)	---	5.0	Cadmium	TVS	TVS
		pH	6.5 - 9.0	---	Chromium III	TVS	TVS
		chlorophyll a (mg/m ²)	---	TVS	Chromium III(T)	---	100
		E. coli (per 100 mL)	---	126	Chromium VI	TVS	TVS
		Inorganic (mg/L)			Copper	---	TVS*
			acute	chronic	Copper	TVS*	---
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	---	Manganese	TVS	TVS
		Chlorine	0.019	0.011	Mercury(T)	---	0.01
		Cyanide	0.005	---	Molybdenum(T)	---	150
		Nitrate	100	---	Nickel	TVS	TVS
		Nitrite	---	0.5	Selenium	21*	13*
		Phosphorus	---	---	Silver	TVS	TVS
		Sulfate	---	---	Uranium	varies*	varies*
	Sulfide	---	0.002	Zinc	TVS	TVS	

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REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

3b. Hayesmount Tributaries, including all tributaries, including the Upper Hayesmount Tributary from the source to the confluence with Box Elder Creek and the Lower Hayesmount Tributaries from the source to the Denver Hudson Canal.						
COSPMS03B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture Aq Life Warm 2 Recreation E	DM	MWAT	acute chronic		
UP		Temperature °C	WS-III	WS-III	Arsenic	340
		acute	chronic	Arsenic(T)	---	100
Qualifiers:	D.O. (mg/L)	---	narrative*	Cadmium	TVS	TVS
Other:	pH	6.5 - 9.0	---	Chromium III	TVS	TVS
	chlorophyll a (mg/m ²)	---	TVS	Chromium III(T)	---	100
	E. coli (per 100 mL)	---	126	Chromium VI	TVS	TVS
	Inorganic (mg/L)			Copper	TVS	TVS
		acute	chronic	Iron(T)	---	1000
	Ammonia	TVS	TVS	Lead	TVS	TVS
	Boron	---	0.75	Manganese	TVS	TVS
	Chloride	---	---	Mercury(T)	---	0.01
	Chlorine	0.019	0.011	Molybdenum(T)	---	150
	Cyanide	0.005	---	Nickel	TVS	TVS
	Nitrate	100	---	Selenium	TVS	TVS
	Nitrite	---	0.5	Silver	TVS	TVS
	Phosphorus	---	TVS	Uranium	varies*	varies*
	Sulfate	---	---	Zinc	TVS	TVS
	Sulfide	---	0.002			
4. Barr Lake and Milton Reservoir.						
COSPMS04	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture Aq Life Warm 2 Recreation E Water Supply	DM	MWAT	acute chronic		
UP		Temperature °C	WL	WL	Arsenic	340
		acute	chronic	Arsenic(T)	---	0.02
Qualifiers:	D.O. (mg/L)	---	5.0	Cadmium	TVS	TVS
Water + Fish Standards	pH	6.5 - 9.0	---	Cadmium(T)	5.0	---
Other:	chlorophyll a (ug/L)	---	TVS	Chromium III	---	TVS
	E. coli (per 100 mL)	---	126	Chromium III(T)	50	---
	Inorganic (mg/L)			Chromium VI	TVS	TVS
		acute	chronic	Copper	TVS	TVS
	Ammonia	TVS	TVS	Iron	---	WS
	Boron	---	0.75	Iron(T)	---	1000
	Chloride	---	250	Lead	TVS	TVS
	Chlorine	0.019	0.011	Lead(T)	50	---
	Cyanide	0.005	---	Manganese	TVS	TVS/WS
	Nitrate	10	---	Mercury(T)	---	0.01
	Nitrite	---	0.5	Molybdenum(T)	---	150
	Phosphorus	---	---	Nickel	TVS	TVS
	Sulfate	---	WS	Nickel(T)	---	100
	Sulfide	---	0.002	Selenium	TVS	TVS
				Silver	TVS	TVS
				Uranium	varies*	varies*
				Zinc	TVS	TVS

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t = total
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D.O. = dissolved oxygen
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