

**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 \_\_\_\_\_

## 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 <sup>2</sup>	=	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

15. Mainstem of the South Platte River from the Burlington Ditch diversion in Denver, Colorado, to a point immediately below the confluence with Big Dry Creek.							
COSPUS15	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT			
UPReviewable					acute	chronic	
	Agriculture						
	Aq Life Warm 1	Temperature °C	WS-I	WS-I	Arsenic	340	---
	Recreation E		acute	chronic	Arsenic(T)	---	0.02
	Water Supply	D.O. (mg/L)	varies*	varies*	Cadmium	TVS	TVS
Qualifiers:		pH	6.0-9.0*	---	Cadmium(T)	5.0	---
Other:		pH	6.5 - 9.0	---	Chromium III	---	TVS
Temporary Modification(s):		chlorophyll a (mg/m2)	---	---	Chromium III(T)	50	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium VI	TVS	TVS
Expiration Date of 12/31/2024			<b>Inorganic (mg/L)</b>		Copper	---	TVS*
Discharger Specific Variance(s):					Copper	TVS*	---
Selenium(acute) = TVS: no limit					Iron	---	WS
Selenium(chronic) = TVS: 24 µg/L		Ammonia	TVS*	TVS*	Iron(T)	---	1000
Expiration Date of 12/31/2023		Boron	---	0.75	Lead	TVS	TVS
*Ammonia(acute) = See section 38.6(4) for site-specific standards.		Chloride	---	250	Lead(T)	50	---
*Ammonia(chronic) = See section 38.6(4) for site-specific standards.		Chlorine	0.019	0.011	Manganese	TVS	TVS/400
*Copper(acute) = Copper BLM-based FMB		Cyanide	0.005	---	Mercury(T)	---	0.01
Cu FMB(ac)=26.4 ug/l		Nitrate	10	---	Molybdenum(T)	---	150
Downstream of the Metro Hite WWTF outfall.		Nitrite	1.0	---	Nickel	TVS	TVS
*Copper(chronic) = Copper BLM-based FMB		Phosphorus	---	---	Nickel(T)	---	100
Cu FMB(ch)= 18.0 ug/l		Sulfate	---	WS	Selenium	TVS	TVS
Downstream of the Metro Hite WWTF outfall.		Sulfide	---	0.002	Silver	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.					Uranium	varies*	varies*
*Uranium(chronic) = See 38.5(3) for details.					Zinc	TVS	TVS
*D.O. (mg/L)(acute) = See section 38.6(4) for site-specific standards.							
*D.O. (mg/L)(chronic) = See section 38.6(4) for site-specific standards.							
*pH(acute) = 6.0 - 9.0 from 64th Ave. downstream 2 miles							
*Variance: Selenium = see 38.6(6) for details.							

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

## Clear Creek Basin

15. Mainstem of Clear Creek from Youngfield Street in Wheat Ridge, Colorado, to the confluence with the South Platte River.							
COSPCL15	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT			
					acute	chronic	
UP-Reviewable	Agriculture Aq Life Warm 1 Recreation E Water Supply	Temperature °C	WS-II	WS-II	Arsenic	340	---
			acute	chronic	Arsenic(T)	---	0.02
		D.O. (mg/L)	---	5.0	Cadmium	TVS	TVS
		pH	6.5 - 9.0	---	Cadmium(T)	5.0	---
		chlorophyll a (mg/m2)	---	---	Chromium III	---	TVS
Qualifiers:		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	---
Other:		<b>Inorganic (mg/L)</b>			Chromium VI	TVS	TVS
			acute	chronic	Copper	TVS	TVS
Temporary Modification(s):		Ammonia	TVS	TVS	Iron	---	WS
Arsenic(chronic) = hybrid		Boron	---	0.75	Iron(T)	---	1000
Expiration Date of 12/31/2024		Chloride	---	250	Lead	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Chlorine	0.019	0.011	Lead(T)	50	---
*Uranium(chronic) = See 38.5(3) for details.		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

## Middle South Platte River Basin

1a. Mainstem of the South Platte River from a point immediately below the confluence with Big Dry Creek to the confluence with St. Vrain Creek.							
COSPMS01A	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
<b>UP</b> Reviewable	Agriculture						
	Aq Life Warm 1	Temperature °C	WS-I	WS-I	Arsenic	340	---
	Recreation E		<b>acute</b>	<b>chronic</b>	Arsenic(T)	---	0.02
	Water Supply	D.O. (mg/L)	varies*	varies*	Cadmium	TVS	TVS
<b>Qualifiers:</b>		pH	6.5 - 9.0	---	Cadmium(T)	5.0	---
<b>Other:</b>		chlorophyll a (mg/m2)	---	---	Chromium III	---	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	---
Arsenic(chronic) = hybrid		<b>Inorganic (mg/L)</b>			Chromium VI	TVS	TVS
Expiration Date of 12/31/2024			<b>acute</b>	<b>chronic</b>	Copper	---	18.0*
*Ammonia(acute) = See section 38.6(4) for site-specific standards.		Ammonia	TVS*	TVS*	Copper	26.4*	---
*Ammonia(chronic) = See section 38.6(4) for site-specific standards.		Boron	---	0.75	Iron	---	WS
*Copper(acute) = Copper BLM-based FMB Cu FMB(ac)=26.4 ug/l		Chloride	---	250	Iron(T)	---	1000
*Copper(chronic) = Copper BLM-based FMB Cu FMB(ch)=18.0 ug/l		Chlorine	0.019	0.011	Lead	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Cyanide	0.005	---	Lead(T)	50	---
*Uranium(chronic) = See 38.5(3) for details.		Nitrate	10	---	Manganese	TVS	TVS/WS
*D.O. (mg/L)(acute) = See section 38.6(4) for site-specific standards.		Nitrite	---	0.5	Mercury(T)	---	0.01
*D.O. (mg/L)(chronic) = See section 38.6(4) for site-specific standards.		Phosphorus	---	---	Molybdenum(T)	---	150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					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.

## **STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS – FOOTNOTES**

- (A) Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.
  
- (B) Assessment of adequate refuge shall rely on the Cold Large Lake table value temperature criterion and applicable dissolved oxygen standard rather than the site-specific temperature standard.