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 11/30/2022

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	=	*Escherichia coli*
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

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
Designation	Agriculture
Reviewable	Aq Life Warm 1
	Recreation E
	Water Supply

Qualifiers:

Other:

Temporary Modification(s):

Arsenic(chronic) = hybrid

Expiration Date of 12/31/2024

Discharger Specific Variance(s):

Selenium(acute) = TVS: no limit

Selenium(chronic) = TVS: 24 µg/L

Expiration Date of 12/31/2023

*Ammonia(acute) = See section 38.6(4) for site-specific standards.
*Ammonia(chronic) = See section 38.6(4) for site-specific standards.
*Copper(acute) = Copper BLM-based FMB Cu FMB(ac)=26.4 ug/l Downstream of the Metro Hite WWTF outfall.
*Copper(chronic) = Copper BLM-based FMB Cu FMB(ch)= 18.0 ug/l Downstream of the Metro Hite WWTF outfall.
*Uranium(acute) = See 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.
*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.

Physical and Biological

	DM	MWAT
Temperature °C	WS-I	WS-I
	acute	**chronic**
D.O. (mg/L)	varies*	varies*
pH	6.0-9.0*	---
pH	6.5 - 9.0	---
chlorophyll a (mg/m^2)	---	---
E. coli (per 100 mL)	---	126

Inorganic (mg/L)

	acute	chronic
Ammonia	TVS*	TVS*
Boron	---	0.75
Chloride	---	250
Chlorine	0.019	0.011
Cyanide	0.005	---
Nitrate	10	---
Nitrite	1.0	---
Phosphorus	---	---
Sulfate	---	WS
Sulfide	---	0.002

Metals (ug/L)

	acute	chronic
Arsenic	340	---
Arsenic(T)	---	0.02
Cadmium	TVS	TVS
Cadmium(T)	5.0	---
Chromium III	---	TVS
Chromium III(T)	50	---
Chromium VI	TVS	TVS
Copper	---	TVS*
Copper	TVS*	---
Iron	---	WS
Iron(T)	---	1000
Lead	TVS	TVS
Lead(T)	50	---
Manganese	TVS	TVS/400
Mercury(T)	---	0.01
Molybdenum(T)	---	150
Nickel	TVS	TVS
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.

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
Designation	Agriculture
Reviewable	Aq Life Warm 1
	Recreation E
	Water Supply

Qualifiers:

Other:

Temporary Modification(s):
Arsenic(chronic) = hybrid
Expiration Date of 12/31/2024

*Uranium(acute) = See 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.

Physical and Biological

	DM	MWAT
Temperature °C	WS-II	WS-II
	acute	**chronic**
D.O. (mg/L)	---	5.0
pH	6.5 - 9.0	---
chlorophyll a (mg/m^2)	---	---
E. coli (per 100 mL)	---	126

Inorganic (mg/L)

	acute	chronic
Ammonia	TVS	TVS
Boron	---	0.75
Chloride	---	250
Chlorine	0.019	0.011
Cyanide	0.005	---
Nitrate	10	---
Nitrite	---	0.5
Phosphorus	---	---
Sulfate	---	WS
Sulfide	---	0.002

Metals (ug/L)

	acute	chronic
Arsenic	340	---
Arsenic(T)	---	0.02
Cadmium	TVS	TVS
Cadmium(T)	5.0	---
Chromium III	---	TVS
Chromium III(T)	50	---
Chromium VI	TVS	TVS
Copper	TVS	TVS
Iron	---	WS
Iron(T)	---	1000
Lead	TVS	TVS
Lead(T)	50	---
Manganese	TVS	TVS/WS
Mercury(T)	---	0.01
Molybdenum(T)	---	150
Nickel	TVS	TVS
Nickel(T)	---	100
Selenium	TVS	TVS
Silver	TVS	TVS
Uranium	varies*	varies*
Zinc	TVS	TVS

16a. Mainstem of Lena Gulch including all tributaries and wetlands from its source to the inlet of Maple Grove Reservoir.

COSPCL16A	Classifications
Designation	Agriculture
UP	Aq Life Warm 2
	Recreation E
	Water Supply

Qualifiers:

Other:

*Uranium(acute) = See 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.

Physical and Biological

	DM	MWAT
Temperature °C	WS-II	WS-II
	acute	**chronic**
D.O. (mg/L)	---	5.0
pH	6.5 - 9.0	---
chlorophyll a (mg/m^2)	---	150
E. coli (per 100 mL)	---	126

Inorganic (mg/L)

	acute	chronic
Ammonia	TVS	TVS
Boron	---	0.75
Chloride	---	250
Chlorine	0.019	0.011
Cyanide	0.005	---
Nitrate	10	---
Nitrite	---	0.05
Phosphorus	---	0.17
Sulfate	---	WS
Sulfide	---	0.002

Metals (ug/L)

	acute	chronic
Arsenic	340	---
Arsenic(T)	---	0.02-10 [A]
Cadmium	TVS	TVS
Cadmium(T)	5.0	---
Chromium III	---	TVS
Chromium III(T)	50	---
Chromium VI	TVS	TVS
Copper	TVS	TVS
Iron	---	WS
Iron(T)	---	1000
Lead	TVS	TVS
Lead(T)	50	---
Manganese	TVS	TVS/WS
Mercury(T)	---	0.01
Molybdenum(T)	---	150
Nickel	TVS	TVS
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.

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
Designation	Agriculture
Reviewable	Aq Life Warm 1
	Recreation E
	Water Supply

Qualifiers:

Other:

Temporary Modification(s):

Arsenic(chronic) = hybrid

Expiration Date of 12/31/2024

*Ammonia(acute) = See section 38.6(4) for site-specific standards.
*Ammonia(chronic) = See section 38.6(4) for site-specific standards.
*Copper(acute) = Copper BLM-based FMB Cu FMB(ac)=26.4 ug/l
*Copper(chronic) = Copper BLM-based FMB Cu FMB(ch)=18.0 ug/l
*Uranium(acute) = See 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.
*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.

Physical and Biological

	DM	MWAT
Temperature °C	WS-I	WS-I
	acute	**chronic**
D.O. (mg/L)	varies*	varies*
pH	6.5 - 9.0	---
chlorophyll a (mg/m^2)	---	---
E. coli (per 100 mL)	---	126

Inorganic (mg/L)

	acute	chronic
Ammonia	TVS*	TVS*
Boron	---	0.75
Chloride	---	250
Chlorine	0.019	0.011
Cyanide	0.005	---
Nitrate	10	---
Nitrite	---	0.5
Phosphorus	---	---
Sulfate	---	WS
Sulfide	---	0.002

Metals (ug/L)

	acute	chronic
Arsenic	340	---
Arsenic(T)	---	0.02
Cadmium	TVS	TVS
Cadmium(T)	5.0	---
Chromium III	---	TVS
Chromium III(T)	50	---
Chromium VI	TVS	TVS
Copper	---	18.0*
Copper	26.4*	---
Iron	---	WS
Iron(T)	---	1000
Lead	TVS	TVS
Lead(T)	50	---
Manganese	TVS	TVS/WS
Mercury(T)	---	0.01
Molybdenum(T)	---	150
Nickel	TVS	TVS
Nickel(T)	---	100
Selenium	TVS	TVS
Silver	TVS	TVS
Uranium	varies*	varies*
Zinc	TVS	TVS

1b. Mainstem of the South Platte River from a point immediately below the confluence with St. Vrain Creek to the Weld/Morgan County Line.

COSPMS01B	Classifications
Designation	Agriculture
Reviewable	Aq Life Warm 1
	Recreation E
	Water Supply

Qualifiers:

Other:

Temporary Modification(s):

Arsenic(chronic) = hybrid

Expiration Date of 12/31/2024

*Uranium(acute) = See 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.

Physical and Biological

	DM	MWAT
Temperature °C	WS-I	WS-I
	acute	**chronic**
D.O. (mg/L)	---	5.0
pH	6.5 - 9.0	---
chlorophyll a (mg/m^2)	---	---
E. coli (per 100 mL)	---	126

Inorganic (mg/L)

	acute	chronic
Ammonia	TVS	TVS
Boron	---	0.75
Chloride	---	250
Chlorine	0.019	0.011
Cyanide	0.005	---
Nitrate	10	---
Nitrite	---	0.5
Phosphorus	---	---
Sulfate	---	WS
Sulfide	---	0.002

Metals (ug/L)

	acute	chronic
Arsenic	340	---
Arsenic(T)	---	0.02
Cadmium	TVS	TVS
Cadmium(T)	5.0	---
Chromium III	---	TVS
Chromium III(T)	50	---
Chromium VI	TVS	TVS
Copper	TVS	TVS
Iron	---	WS
Iron(T)	---	1000
Lead	TVS	TVS
Lead(T)	50	---
Manganese	TVS	TVS/WS
Mercury(T)	---	0.01
Molybdenum(T)	---	150
Nickel	TVS	TVS
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.