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

5 CCR 1002-33

REGULATION NO. 33
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
UPPER COLORADO RIVER BASIN AND
NORTH PLATTE RIVER (PLANNING REGION 12)

APPENDIX 33-1
Stream Classifications and Water Quality Standards Tables

Effective 06/30/2021

## **Abbreviations and Acronyms**

Aquatic =

Aq °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<sup>2</sup> milligrams per square meter

mĹ

**MWAT** maximum weekly average temperature

OW outstanding waters

sculpin SC

SSE site-specific equation total recoverable Т

total t = tr trout

TVS = table value standard micrograms per liter μg/L = 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 #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Yampa River Basin

COUCYA06	Classifications	Physical and	Biological		ı	Metals (ug/L)	
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Arsenic	340	
	Recreation E		acute	chronic	Arsenic(T)		0.02
	Water Supply	D.O. (mg/L)		6.0	Cadmium	TVS	TVS
Qualifiers:		D.O. (spawning)		7.0	Cadmium(T)	5.0	
Other:		pH	6.5 - 9.0		Chromium III		TVS
Temporary Modification(s):		chlorophyll a (mg/m²)		150	Chromium III(T)	50	
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)		126	Chromium VI	TVS	TVS
Expiration Date of 12/31/2024					Copper	TVS	TVS
•		Inorganic (mg/L)			Iron		WS
*Uranium(acute) = See 33.5(3) for details.  *Uranium(chronic) = See 33.5(3) for details.			acute	chronic	Iron(T)		1000
		Ammonia	TVS	TVS	Lead	TVS	TVS
		Boron		0.75	Lead(T)	50	
		Chloride		250	Manganese	TVS	TVS/WS
		Chlorine	0.019	0.011	Mercury(T)		0.01
		Cyanide	0.005		Molybdenum(T)		150
		Nitrate	10		Nickel	TVS	TVS
		Nitrite	0.05		Nickel(T)		100
		Phosphorus		0.11	Selenium	TVS	TVS
		Sulfate		WS	Silver	TVS	TVS(tr)
		Sulfide		0.002	Uranium	varies*	varies*
					Zinc	TVS	TVS
. Mainstem o	of Oak Creek, including all tributaries	and wetlands, from a point 0.25 m	ile below County R	oad 27 (40.2	79241, -106.965405) to the	e confluence with the	Vamna River
COUCYA07 Classifications		Physical and Biological					rampa raver.
OUCYA07	Classifications	Physical and	Biological	,	ı	Metals (ug/L)	Tampa River.
	Classifications Agriculture	Physical and	Biological DM	MWAT			chronic
esignation	Agriculture Aq Life Cold 1	Physical and Temperature °C		·	Arsenic	Metals (ug/L)	•
esignation	Agriculture Aq Life Cold 1 Recreation P		DM	MWAT		Metals (ug/L) acute	chronic
<b>Designation</b> Designation	Agriculture Aq Life Cold 1	Temperature °C  D.O. (mg/L)	DM CS-II	MWAT CS-II	Arsenic	Metals (ug/L) acute 340	chronic
<b>Designation</b> Reviewable	Agriculture Aq Life Cold 1 Recreation P	Temperature °C	DM CS-II acute	MWAT CS-II chronic	Arsenic Arsenic(T)	Metals (ug/L) acute 340	<b>chronic</b>  0.02
Designation Reviewable Qualifiers:	Agriculture Aq Life Cold 1 Recreation P	Temperature °C  D.O. (mg/L)	DM CS-II acute	MWAT CS-II chronic 6.0	Arsenic Arsenic(T) Cadmium	Metals (ug/L) acute 340 TVS	chronic  0.02 TVS
esignation eviewable tualifiers:	Agriculture Aq Life Cold 1 Recreation P	Temperature °C  D.O. (mg/L)  D.O. (spawning)	DM CS-II acute 	MWAT CS-II chronic 6.0 7.0	Arsenic Arsenic(T) Cadmium Cadmium(T)	Metals (ug/L)  acute  340   TVS  5.0	chronic  0.02 TVS
Designation Deviewable	Agriculture Aq Life Cold 1 Recreation P Water Supply	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH	DM CS-II acute   6.5 - 9.0	MWAT CS-II chronic 6.0 7.0	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III	Metals (ug/L)  acute  340   TVS  5.0	chronic 0.02 TVS TVS
Designation Deviewable	Agriculture Aq Life Cold 1 Recreation P Water Supply	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)	DM CS-II acute   6.5 - 9.0	MWAT CS-II chronic 6.0 7.0 150*	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T)	Metals (ug/L)  acute  340   TVS  5.0   50	chronic 0.02 TVS TVS
Reviewable Rualifiers: Other: Remporary Marsenic(chron Data	Agriculture Aq Life Cold 1 Recreation P Water Supply  Modification(s): nic) = hybrid	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)	DM CS-II acute   6.5 - 9.0	MWAT CS-II chronic 6.0 7.0 150*	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI	Metals (ug/L)  acute  340  TVS  5.0  50  TVS	chronic 0.02 TVS TVS TVS
Designation Reviewable Rualifiers: Other: Temporary Marsenic(chronomicspiration Data) Discharger Sp. Litrate(acute)	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  flodification(s):  nic) = hybrid  te of 12/31/2024  pecific Variance(s):  = See Section 33.6(c) for details on	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)	DM CS-II acute   6.5 - 9.0	MWAT CS-II chronic 6.0 7.0 150*	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper	Metals (ug/L)  acute  340  TVS  5.0  50  TVS  TVS	chronic  0.02  TVS  TVS  TVS  TVS
Reviewable	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  Modification(s):  Dic) = hybrid  te of 12/31/2024  Decific Variance(s):	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)	DM CS-II acute   6.5 - 9.0  	MWAT CS-II chronic 6.0 7.0 150* 205	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron	Metals (ug/L)  acute  340  TVS 5.0  50  TVS  TVS  TVS  TVS	chronic  0.02  TVS  TVS  TVS  TVS  TVS  WS
tualifiers:  ther: emporary M rsenic(chron xpiration Dat discharger Sp litrate(acute) ariance for th xpiration Dat	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  dodification(s):  nic) = hybrid  te of 12/31/2024  pecific Variance(s):  = See Section 33.6(c) for details on  ne Town of Oak Creek.  te of 6/30/2026	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)  Inorgan  Ammonia	DM	MWAT CS-II chronic 6.0 7.0 150* 205	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron Iron(T)	Metals (ug/L)  acute  340 TVS 5.0 50 TVS TVS	Chronic 0.02 TVS TVS TVS TVS WS 1000
esignation eviewable  ualifiers:  ther: emporary M rsenic(chron xpiration Dat ischarger Sp itrate(acute) ariance for th xpiration Dat chlorophyll a ne facilities lis	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  Modification(s):  iic) = hybrid  te of 12/31/2024  pecific Variance(s):  = See Section 33.6(c) for details on the Town of Oak Creek.  te of 6/30/2026  (mg/m²)(chronic) = applies only abouted at 33.5(4).	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)  Inorgan  Ammonia	DM	MWAT CS-II chronic 6.0 7.0 150* 205  chronic TVS	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron Iron(T)	Metals (ug/L)  acute  340 TVS 5.0 50 TVS TVS TVS	Chronic 0.02 TVS
eviewable	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  Modification(s):  nic) = hybrid  te of 12/31/2024  pecific Variance(s):  = See Section 33.6(c) for details on  the Town of Oak Creek.  te of 6/30/2026  (mg/m²)(chronic) = applies only about the  chronic) = applies only above the	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)  Inorgan  Ammonia  Boron	DM CS-II acute  6.5 - 9.0   ic (mg/L) acute TVS	MWAT CS-II chronic 6.0 7.0 150* 205  chronic TVS 0.75	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron Iron(T) Lead Lead(T)	Metals (ug/L)  acute  340 TVS 5.0 50 TVS TVS TVS TVS 50	Chronic 0.02 TVS TVS TVS WS 1000 TVS
eviewable  tualifiers:  ther:  emporary M rsenic(chron xpiration Data sischarger Sp litrate(acute) ariance for th xpiration Data chlorophyll a he facilities lise Phosphorus( acilities listed	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  Modification(s):  nic) = hybrid  te of 12/31/2024  pecific Variance(s):  = See Section 33.6(c) for details on  the Town of Oak Creek.  te of 6/30/2026  (mg/m²)(chronic) = applies only about the  chronic) = applies only above the	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)  Inorgan  Ammonia  Boron  Chloride	DM CS-II acute   6.5 - 9.0   ic (mg/L) acute TVS 	MWAT CS-II chronic 6.0 7.0 150* 205  chronic TVS 0.75 250	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron Iron(T) Lead Lead(T) Manganese	Metals (ug/L)  acute  340 TVS 5.0 50 TVS TVS TVS 50 TVS TVS TVS 50 TVS	Chronic 0.02 TVS TVS TVS STVS 1000 TVS TVS/WS
eviewable  tualifiers:  ther:  emporary M rsenic(chron xpiration Data bischarger Sp litrate(acute) ariance for th xpiration Data chlorophyll a the facilities lise Phosphorus( acilities listed Uranium(acu	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  Modification(s):  Inic) = hybrid  Ite of 12/31/2024  Decific Variance(s):  I = See Section 33.6(c) for details on  Ite of 6/30/2026  Ite of 6/30/2026  Ite of 6/30/2026  Ite of 6/30/2026  Ite of 33.5(4).  Iteronic) = applies only above the  Ite of 33.5(4).	Temperature °C  D.O. (mg/L) D.O. (spawning) pH chlorophyll a (mg/m²) E. Coli (per 100 mL)  Inorgan  Ammonia Boron Chloride Chlorine	DM CS-II acute  6.5 - 9.0   ic (mg/L) acute TVS  	MWAT CS-II chronic 6.0 7.0 150* 205  chronic TVS 0.75 250 0.011	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron Iron(T) Lead Lead(T) Manganese Mercury(T)	Metals (ug/L)  acute  340 TVS 5.0 50 TVS TVS TVS 50 TVS TVS 50 TVS	Chronic 0.02 TVS TVS TVS WS 1000 TVS TVSWS 0.01
Designation Reviewable  Rualifiers: Dether: Demorary Marsenic(chronexpiration Data Discharger Spatierate (acute) ariance for the expiration Data Chlorophyll a ne facilities lis Phosphorus (acilities listed Uranium (acu	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  Modification(s):  iic) = hybrid  te of 12/31/2024  pecific Variance(s):  = See Section 33.6(c) for details on the Town of Oak Creek.  te of 6/30/2026  (mg/m²)(chronic) = applies only abortsted at 33.5(4).  chronic) = applies only above the at 33.5(4).  itte) = See 33.5(3) for details.	Temperature °C  D.O. (mg/L) D.O. (spawning) pH chlorophyll a (mg/m²) E. Coli (per 100 mL)  Inorgan  Ammonia Boron Chloride Chlorine Cyanide	DM  CS-II  acute 6.5 - 9.0 ic (mg/L)  acute  TVS 0.019 0.005	MWAT CS-II chronic 6.0 7.0 150* 205  chronic TVS 0.75 250 0.011	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron Iron(T) Lead Lead(T) Manganese Mercury(T) Molybdenum(T)	Metals (ug/L)  acute  340 TVS 5.0 50 TVS TVS TVS 50 TVS TVS 50 TVS TVS	Chronic 0.02 TVS TVS TVS S 1000 TVS TVS/WS 0.01 150
Resignation Reviewable	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  Modification(s):  iic) = hybrid  te of 12/31/2024  pecific Variance(s):  = See Section 33.6(c) for details on the Town of Oak Creek.  te of 6/30/2026  (mg/m²)(chronic) = applies only abortsted at 33.5(4).  chronic) = applies only above the at 33.5(4).  itte) = See 33.5(3) for details.	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)  Inorgan  Ammonia  Boron  Chloride  Chlorine  Cyanide  Nitrate	DM CS-II acute 6.5 - 9.0 ic (mg/L) acute TVS 0.019 0.005 10	MWAT CS-II chronic 6.0 7.0 150* 205  chronic TVS 0.75 250 0.011	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron Iron(T) Lead Lead(T) Manganese Mercury(T) Molybdenum(T) Nickel	Metals (ug/L)  acute  340 TVS 5.0 50 TVS TVS TVS 50 TVS TVS 50 TVS TVS 50 TVS TVS TVS TVS TVS TVS	Chronic 0.02 TVS TVS TVS S TVS TVS S 1000 TVS TVS/WS 0.01 150 TVS
Designation Reviewable  Rualifiers: Dether: Demorary Marsenic(chronexpiration Data Discharger Spatierate (acute) ariance for the expiration Data Chlorophyll a ne facilities lis Phosphorus (acilities listed Uranium (acu	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  Modification(s):  iic) = hybrid  te of 12/31/2024  pecific Variance(s):  = See Section 33.6(c) for details on the Town of Oak Creek.  te of 6/30/2026  (mg/m²)(chronic) = applies only abortsted at 33.5(4).  chronic) = applies only above the at 33.5(4).  itte) = See 33.5(3) for details.	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)  Inorgan  Ammonia  Boron  Chloride  Chlorine  Cyanide  Nitrate  Nitrite	DM  CS-II  acute 6.5 - 9.0 ic (mg/L)  acute TVS 0.019 0.005 10 0.05	MWAT CS-II chronic 6.0 7.0 150* 205  chronic TVS 0.75 250 0.011	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron Iron(T) Lead Lead(T) Manganese Mercury(T) Molybdenum(T) Nickel Nickel(T)	Metals (ug/L)  acute  340 TVS 5.0 50 TVS TVS TVS 50 TVS TVS 50 TVS TVS 50 TVS TVS TVS TVS TVS TVS TVS	Chronic 0.02 TVS TVS TVS STVS 1000 TVS TVS/WS 0.01 150 TVS 100
Designation Reviewable  Qualifiers: Dether:  Temporary Marsenic(chrone) Expiration Data Discharger Spalitrate(acute) Pariance for the Expiration Data Chlorophyll a ne facilities lis Phosphorus(acilities listed Uranium(acu	Agriculture  Aq Life Cold 1  Recreation P  Water Supply  Modification(s):  iic) = hybrid  te of 12/31/2024  pecific Variance(s):  = See Section 33.6(c) for details on the Town of Oak Creek.  te of 6/30/2026  (mg/m²)(chronic) = applies only abortsted at 33.5(4).  chronic) = applies only above the at 33.5(4).  itte) = See 33.5(3) for details.	Temperature °C  D.O. (mg/L)  D.O. (spawning)  pH  chlorophyll a (mg/m²)  E. Coli (per 100 mL)  Inorgan  Ammonia  Boron  Chloride  Chlorine  Cyanide  Nitrate  Nitrite  Phosphorus	DM  CS-II  acute 6.5 - 9.0 ic (mg/L)  acute  TVS 0.019 0.005 10 0.05	MWAT CS-II chronic 6.0 7.0 150* 205  chronic TVS 0.75 250 0.011 0.11*	Arsenic Arsenic(T) Cadmium Cadmium(T) Chromium III Chromium III(T) Chromium VI Copper Iron Iron(T) Lead Lead(T) Manganese Mercury(T) Molybdenum(T) Nickel Nickel(T) Selenium	Metals (ug/L)  acute  340 TVS 5.0 50 TVS TVS TVS 50 TVS	Chronic 0.02 TVS TVS TVS STVS 1000 TVS TVS/WS 0.01 150 TVS 1000 TVS

sc = sculpin

D.O. = dissolved oxygen

## 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.