

## IDAPA 58 – DEPARTMENT OF ENVIRONMENTAL QUALITY

### 58.01.02 – WATER QUALITY STANDARDS

#### DOCKET NO. 58-0102-2201

#### NOTICE OF RULEMAKING – ADOPTION OF PENDING RULE

**EFFECTIVE DATE:** This rule has been adopted by the Idaho Board of Environmental Quality (Board) and is now pending review by the 2023 Idaho State Legislature for final approval. The pending rule will become final and effective upon the adjournment sine die of the First Regular Session of the Sixty-seventh Idaho Legislature unless the rule is rejected in whole or in part by concurrent resolution in accordance with Idaho Code Sections 67-5224 and 67-5291.

**AUTHORITY:** In compliance with Section 67-5224, Idaho Code, notice is hereby given that the Board has adopted a pending rule. This action is authorized by Sections 39-105, 39-107, and 39-3601 et seq., Idaho Code.

**DESCRIPTIVE SUMMARY:** A detailed summary of the reason for adopting the rule is set forth in the initial proposal published in the Idaho Administrative Bulletin, March 2, 2022, [Vol. 22-3, pages 28 through 46](#).

After consideration of public comments, Subsection 210.01.b., Footnote k, and Subsection 210.03.e. have been revised. The remainder of the rule has been adopted as initially proposed. The board meeting documents are available at <https://www.deq.idaho.gov/water-quality-docket-no-58-0102-2201/> or by contacting the undersigned.

**FISCAL IMPACT STATEMENT:** The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year: Not applicable.

**ASSISTANCE ON TECHNICAL QUESTIONS:** For assistance on questions concerning the rulemaking, contact the undersigned.

Dated this 6th day of July, 2022

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#### DOCKET NO. 58-0102-2201 – ADOPTION OF PENDING RULE

Substantive changes have been made to the pending rule.  
Italicized red text *double underscored* indicates changes between the text of the proposed rule as adopted in the pending rule.

The text of the proposed rule was published in the Idaho Administrative Bulletin, [Volume 22-3, March 2, 2022, pages 28 through 46](#).

This rule has been adopted as a pending rule by the Agency and is now awaiting review and final approval by the 2023 Idaho State Legislature.

THE FOLLOWING IS THE TEXT OF THE PENDING RULE FOR DOCKET NO. 58-0102-2201

(Only those sections or subsections that have changed from the original proposed text are printed in this Bulletin following this notice.)

210. NUMERIC CRITERIA FOR TOXIC SUBSTANCES FOR WATERS DESIGNATED FOR AQUATIC LIFE, RECREATION, OR DOMESTIC WATER SUPPLY USE.

01. **Criteria for Toxic Substances.** The criteria of Section 210 apply to surface waters of the state as provided in Tables 1 and 2 Criteria for metals (arsenic through zinc) listed in Tables 1 and 2 are expressed as a dissolved fraction (i.e., passes through a forty-five hundredths (0.45) micron filter) unless otherwise noted.

(3-31-22)( )

Subsections 210.01 and 210.01.a. are not effective for CWA purposes until the date EPA issues written notification that the revisions in Docket No. 58-0102-2201 have been approved.

[Paragraph 210.01.b. (Table 2 footnote k.)]

b. Table 2 contains criteria set for to protection of human health. The Water & Fish criteria apply to waters designated for domestic water supply use. The Fish Only criteria apply to waters designated for primary or secondary contact recreation use.

(3-31-22)( )

Table 2. Criteria for Protection of Human Health (based on consumption of:)						
Compound	a CAS Number	Carcinogen?	Water & Fish (µg/L <u>unless otherwise specified</u> )		Fish Only (µg/L <u>unless otherwise specified</u> )	
<b>Inorganic Compounds/Metals</b>						
Antimony	7440360		5.2	b	190	b
Arsenic <sup>1</sup>	7440382	Y	10	cdj	10	cdj
<p><b>Note:</b> In 2008, Idaho adopted 10 µg/L as its CWA arsenic criterion for both exposure through fish consumption only and exposure through drinking water+fish consumption, choosing the SDWA MCL due to concerns about background levels that exceed EPA’s 304(a) criteria (docket 58-0102-0801). EPA approved this action in 2010. In June 2015, Northwest Environmental Advocates challenged EPA’s 2010 approval. Court remanded action back to EPA. On September 15, 2016, EPA disapproved Idaho’s adoption of 10 µg/L. Neither EPA nor the state of Idaho has promulgated replacement criteria. For more information, go to <a href="http://www.deq.idaho.gov/epa-actions-on-proposed-standards">http://www.deq.idaho.gov/epa-actions-on-proposed-standards</a>.</p>						
<p><sup>1</sup>Effective for CWA purposes. Water &amp; Fish value, Fish Only value, and footnotes continue to be effective for CWA purposes until the date EPA issues written notification that the revisions in Docket No. 58-0102-2201 have been approved. See Arsenic<sup>2</sup> immediately below.</p>						
Arsenic <sup>2</sup>	7440382	Y	10	cdj	<del>4.3</del> 8.0 µg/kg fish tissue	<del>cdj</del> k

Table 2. Criteria for Protection of Human Health (based on consumption of:)

Compound	<sup>a</sup> CAS Number	Carcinogen?	Water & Fish (µg/L <u>unless otherwise specified</u> )	Fish Only (µg/L <u>unless otherwise specified</u> )		
<i>Note: In 2008, Idaho adopted 10 µg/L as its CWA arsenic criterion for both exposure through fish consumption only and exposure through drinking water + fish consumption, choosing the SDWA MCL due to concerns about background levels that exceed EPA's 304(a) criteria (docket 58-0102-0801). EPA approved this action in 2010. In June 2015, Northwest Environmental Advocates challenged EPA's 2010 approval. Court remanded action back to EPA. On September 15, 2016, EPA disapproved Idaho's adoption of 10 µg/L. Neither EPA nor the state of Idaho has promulgated replacement criteria. For more information, go to <a href="http://www.deq.idaho.gov/epa_actions_on_proposed_standards">http://www.deq.idaho.gov/epa_actions_on_proposed_standards</a>.</i>						
<sup>2</sup> Not yet effective for CWA purposes. Fish Only value and footnote k are not effective for CWA purposes until the date EPA issues written notification that the revisions in Docket No. 58-0102-2201 have been approved.						
Beryllium	7440417			e		e
Cadmium	7440439			e		e
Chromium III	16065831			e		e
Chromium VI	18540299			e		e
Copper	7440508		1300	j		
Lead	7439921			e		e
Methylmercury	22967926				0.3mg/kg	i
Nickel	7440020		58	b	100	b
Selenium	7782492		29	b	250	b
Thallium	7440280		0.017	b	0.023	b
Zinc	7440666		870	b	1,500	b
<b>Inorganic Compounds/Non-Metals</b>						
Cyanide	57125		3.9	b	140	b
Asbestos	1332214		7,000,000 Fibers/L	j		
<b>Organic Compounds</b>						
Acenaphthene	83329		26	b	28	b
Acenaphthylene	208968			e		e
Acrolein	107028		3.2	b	120	b
Acrylonitrile	107131	Y	0.60	bf	22	bf
Aldrin	309002	Y	2.5E-06	bf	2.5E-06	bf
Anthracene	120127		110	b	120	b
alpha-BHC	319846	Y	0.0012	bf	0.0013	bf
beta-BHC	319857	Y	0.036	bf	0.045	bf

Table 2. Criteria for Protection of Human Health (based on consumption of:)

Compound	a CAS Number	Carcinogen?	Water & Fish		Fish Only	
			(µg/L <u>unless otherwise specified</u> )		(µg/L <u>unless otherwise specified</u> )	
gamma-BHC (Lindane)	58899		1.4	b	1.4	b
delta-BHC	319868			e		e
Benzene	71432		3.0	bf	28	b
Benidine	92875	Y	0.0014	bf	0.033	bf
Benzo(a)Anthracene	56553	Y	0.0042	bf	0.0042	bf
Benzo(b)Fluoranthene	205992	Y	0.0042	bf	0.0042	bf
Benzo(k)Fluoranthene	207089	Y	0.042	bf	0.042	bf
Benzo(ghi)Perylene	191242			e		e
Benzo(a)Pyrene	50328	Y	0.00042	bf	0.00042	bf
Bis(2-Chloroethoxy) Methane	111911			e		e
Bis(2-Chloroethyl) Ether	111444	Y	0.29	bf	6.8	bf
Bis(2-Chloroisopropyl) Ether	108601		220	b	1,200	b
Bis(Chloromethyl) Ether	542881	Y	0.0015	bf	0.055	bf
Bis(2-Ethylhexyl) Phthalate	117817	Y	1.2	bf	1.2	bf
Bromoform	75252	Y	62	bf	380	bf
4-Bromophenyl Phenyl Ether	101553			e		e
Butylbenzyl Phthalate	85687		0.33	b	0.33	b
Carbon Tetrachloride	56235	Y	3.6	bf	15	bf
Chlorobenzene	108907		89	b	270	b
Chlordane	57749	Y	0.0010	bf	0.0010	bf
Chlorodibromomethane	124481	Y	7.4	bf	67	bf
Chloroethane	75003			e		e
2-Chloroethylvinyl Ether	110758			e		e
Chloroform	67663		61	b	730	b
2-Chloronaphthalene	91587		330	b	380	b
2-Chlorophenol	95578		30	b	260	b
Chlorophenoxy Herbicide (2,4-D)	94757		1,000	b	3,900	b

Table 2. Criteria for Protection of Human Health (based on consumption of:)

Compound	a CAS Number	Carcinogen?	Water & Fish (µg/L <u>unless otherwise specified</u> )		Fish Only (µg/L <u>unless otherwise specified</u> )	
Chlorophenoxy Herbicide (2,4,5-TP) [Silvex]	93721		82	b	130	b
4-Chlorophenyl Phenyl Ether	7005723			e		e
Chrysene	218019	Y	0.42	bf	0.42	bf
4,4'-DDD	72548	Y	0.00042	bf	0.00042	bf
4,4'-DDE	72559	Y	5.5E-05	bf	5.5E-05	bf
4,4'-DDT	50293	Y	9.8E-05	bf	9.8E-05	bf
Di-n-Butyl Phthalate	84742		8.2	b	8.3	b
Di-n-Octyl Phthalate	117840			e		e
Dibenzo (a,h) Anthracene	53703	Y	0.00042	bf	0.00042	bf
1,2-Dichlorobenzene	95501		700	b	1,100	b
1,3-Dichlorobenzene	541731		3.5	b	4.8	b
1,4-Dichlorobenzene	106467		180	b	300	b
3,3'-Dichlorobenzidine	91941	Y	0.29	bf	0.48	bf
Dichlorobromomethane	75274	Y	8.8	bf	86	bf
1,1-Dichloroethane	75343			e		e
1,2-Dichloroethane	107062	Y	96	bf	2,000	bf
1,1-Dichloroethylene	75354		310	b	5,200	b
2,4-Dichlorophenol	120832		9.6	b	19	b
1,2-Dichloropropane	78875	Y	8.5	bf	98	bf
1,3-Dichloropropene	542756	Y	2.5	bf	38	bf
Dieldrin	60571	Y	4.2E-06	bf	4.2E-06	bf
Diethyl Phthalate	84662		200	b	210	b
2,4-Dimethylphenol	105679		110	b	820	b
Dimethyl Phthalate	131113		600	b	600	b
Dinitrophenols	25550587		13	b	320	b
2,4-Dinitrophenol	51285		12	b	110	b
2,4-Dinitrotoluene	121142	Y	0.46	bf	5.5	bf
2,6-Dinitrotoluene	606202			e		e
1,2-Diphenylhydrazine	122667	Y	0.25	bf	0.65	bf
2, 3, 7, 8-TCDD Dioxin	1746016	Y	1.8E-08	bf	1.9E-08	bf

Table 2. Criteria for Protection of Human Health (based on consumption of:)

Compound	a CAS Number	Carcinogen?	Water & Fish		Fish Only	
			(µg/L <u>unless otherwise specified</u> )		(µg/L <u>unless otherwise specified</u> )	
alpha-Endosulfan	959988		7.0	b	8.5	b
beta-Endosulfan	33213659		11	b	14	b
Endosulfan Sulfate	1031078		9.9	b	13	b
Endrin	72208		0.011	b	0.011	b
Endrin Aldehyde	7421934		0.38	b	0.40	b
Ethylbenzene	100414		32	b	41	b
Fluoranthene	206440		6.3	b	6.4	b
Fluorene	86737		21	b	22	b
Heptachlor	76448	Y	2.0E-05	bf	2.0E-05	bf
Heptachlor Epoxide	1024573	Y	0.00010	bf	0.00010	bf
Hexachlorobenzene	118741	Y	0.00026	bf	0.00026	bf
Hexachlorobutadiene	87683	Y	0.031	bf	0.031	bf
Hexachlorocyclohexane (HCH)-Technical	608731	Y	0.027	bf	0.032	bf
Hexachloro-cyclopentadiene	77474		1.3	b	1.3	b
Hexachloroethane	67721		0.23	b	0.24	b
Ideno (1,2,3-cd) Pyrene	193395	Y	0.0042	bf	0.0042	bf
Isophorone	78591	Y	330	bf	6,000	bf
Methoxychlor	72435		0.0054	b	0.0055	b
Methyl Bromide	74839		130	b	3,700	b
Methyl Chloride	74873			e		e
3-Methyl-4-Chlorophenol	59507		350	b	750	b
2-Methyl-4,6-Dinitrophenol	534521		1.6	b	8.6	b
Methylene Chloride	75092		38	b	960	b
Naphthalene	91203			e		e
Nitrobenzene	98953		12	b	180	b
2-Nitrophenol	88755			e		e
4-Nitrophenol	100027			e		e
N-Nitrosodimethylamine	62759	Y	0.0065	bf	9.1	bf
N-Nitrosodi-n-Propylamine	621647	Y	0.046	bf	1.5	bf
N-Nitrosodiphenylamine	86306	Y	3.14	bf	18	bf

Table 2. Criteria for Protection of Human Health (based on consumption of:)

Compound	a CAS Number	Carcinogen?	Water & Fish		Fish Only	
			(µg/L <u>unless otherwise specified</u> )		(µg/L <u>unless otherwise specified</u> )	
Pentachlorobenzene	608935		0.035	b	0.036	b
Pentachlorophenol	87865	Y	0.11	bf	0.12	bf
Phenanthrene	85018			e		e
Phenol	108952		3,800	b	85,000	b
Polychlorinated Biphenyls PCBs	g	Y	0.00019	bfh	0.00019	bfh
Pyrene	129000		8.1	b	8.4	b
1,2,4,5-Tetrachlorobenzene	95943		0.0093	b	0.0094	b
1,1,2,2-Tetrachloroethane	79345	Y	1.4	bf	8.6	bf
Tetrachloroethylene	127184		15	b	23	b
Toluene	108883		47	b	170	b
Toxaphene	8001352	Y	0.0023	bf	0.0023	bf
1,2-Trans-Dichloroethylene	156605		120	b	1,200	b
1,2,4-Trichlorobenzene	120821		0.24	b	0.24	b
1,1,1-Trichloroethane	71556		11,000	b	56,000	b
1,1,2-Trichloroethane	79005	Y	4.9	bf	29	bf
Trichloroethylene	79016		2.6	b	11	b
2,4,5-Trichlorophenol	95954		140	b	190	b
2,4,6-Trichlorophenol	88062		1.5	b	2.0	b
Vinyl Chloride	75014	Y	0.21	bf	5.0	bf

**Footnotes for Table 2. Criteria for Protection of Human Health**

a. Chemical Abstracts Service (CAS) registry numbers which provide a unique identification for each chemical.

b. This criterion is based on input values to human health criteria calculation specified in [Idaho's Technical Support Document \(TSD\) for Human Health Criteria Calculations - 2015](#). Criteria for non-carcinogens are calculated using the formula:

Table 2. Criteria for Protection of Human Health (based on consumption of:)

Compound	a CAS Number	Carcinogen?	Water & Fish (µg/L <u>unless otherwise specified</u> )	Fish Only (µg/L <u>unless otherwise specified</u> )
<p>AWQC = RfD * RSC * <math>\left( \frac{BW}{DI + (FI * BAF)} \right)</math></p> <p>and criteria for carcinogens are calculated using the formula:</p> <p>AWQC = RSD * <math>\left( \frac{BW}{DI + (FI * BAF)} \right)</math></p> <p>Where: AWQC = Ambient water quality criterion (mg/L) BW = Human Body Weight (kg), 80 is used in these criteria DI = Drinking Water Intake, (L/day), 2.4 is used in these criteria FI = Fish Intake, (kg/day), 0.0665 is used in these criteria BAF = Bioaccumulation Factor, L/kg, chemical specific value, see TSD RfD = Reference dose (mg/kg-day), chemical specific value, see TSD</p> <p>RSD = <math>\frac{\text{Target Incremental Cancer Risk}}{\text{Cancer Potency Factor}}</math> (mg/kg-day), chemical specific value, see TSD</p> <p>RSC = Relative Source Contribution, chemical specific value, see TSD</p>				
c. Inorganic forms only.				
d. Criterion expressed as total recoverable (unfiltered) concentrations.				
e. No numeric human health criteria has been established for this contaminant. However, permit authorities should address this contaminant in NPDES permit actions using the narrative criteria for toxics from Section 200 of these rules.				
f. EPA guidance allows states to choose from a range of 10 <sup>-4</sup> to 10 <sup>-6</sup> for the incremental increase in cancer risk used in human health criteria calculation. Idaho has chosen to base this criterion on carcinogenicity of 10 <sup>-5</sup> risk.				
g. PCBs are a class of chemicals which include Aroclors, 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469219, 11097691, 11104282, 11141165, 12672296, 11096825 and 12674112 respectively. The aquatic life criteria apply to this set of PCBs.				
h. This criterion applies to total PCBs, (e.g. the sum of all congener, isomer, or Aroclor analyses).				



Table 2. Criteria for Protection of Human Health (based on consumption of:)				
Compound	<sup>a</sup> CAS Number	Carcinogen?	Water & Fish (µg/L <u>unless otherwise specified</u> )	Fish Only (µg/L <u>unless otherwise specified</u> )
<p>i. This fish tissue residue criterion (TRC) for methylmercury is based on a human health reference dose (RfD) of 0.0001 mg/kg body weight-day; a relative source contribution (RSC) estimated to be 27% of the RfD; a human body weight (BW) of 70 kg (for adults); and a total fish consumption rate of 0.0175 kg/day for the general population, summed from trophic level (TL) breakdown of TL2 = 0.0038 kg fish/day + TL3 = 0.0080 kg fish/day + TL4 = 0.0057 kg fish/day. This is a criterion that is protective of the general population. A site-specific criterion or a criterion for a particular subpopulation may be calculated by using local or regional data, rather than the above default values, in the formula: <math>TRC = [BW \times \{RfD - (RSC \times RfD)\}] / TL</math>. In waters inhabited by species listed as threatened or endangered under the Endangered Species Act or designated as their critical habitat, the Department will apply the human health fish tissue residue criterion for methylmercury to the highest trophic level available for sampling and analysis.</p>				
<p>j. This criterion is based on the drinking water Maximum <del>Containment</del> Contaminant Level (MCL).</p>				
<p><u>k. For Fish Only exposure to inorganic arsenic, the human health criterion is:</u></p>				
<u>Fish Tissue (µg/kg wet-weight)</u>		<u>Water Column (µg/L)</u>		
<u>8.0<sup>1</sup></u>		<u>4.3<sup>2</sup></u>		
<p><sup>1</sup><u>Fish tissue element is based on total recoverable inorganic arsenic in muscle or fillet. The fish tissue element supersedes the water column element provided at least ninety (90) days have passed since any new activity or discharge has occurred within the water body. Fish tissue element will be applied in accordance with Subsection 210.03.e.</u></p>				
<p><sup>2</sup><u>Water column element is based on dissolved inorganic arsenic in water.</u></p>				
<p><u>Footnote k is not effective for CWA purposes until the date EPA issues written notification that the revisions in Docket No. 58-0102-2201 have been approved.</u></p>				

(3-31-22)( )

**(BREAK IN CONTINUITY OF SUBSECTIONS)**

**03. Applicability.** The criteria established in Section 210 are subject to the general rules of applicability in the same way and to the same extent as are the other numeric chemical criteria when applied to the same use classifications. Mixing zones may be applied to toxic substance criteria subject to the limitations set forth in Section 060 and set out below. (3-31-22)

**[Paragraph 210.03.e.]**

- e. Application of the fish tissue element of the arsenic criterion for human health. ( )
- i. The fish tissue element for total recoverable inorganic arsenic is based on a single measurement using sufficiently sensitive methods. ( )
- ii. The single measurement must be made on a sample that is an average or composite of a minimum of five (5) individual fish of the same species collected from the same water body within the same calendar year.

When available, game fish species representative of the size and species that may be legally harvested within the waterbody are preferred. Results from multiple sample events may be averaged or composited provided they represent the same species collected from the same water body within the same calendar year. ( )

iii. Not to be exceeded; the Department will evaluate all representative fish tissue data to determine compliance with this criterion element. ( )

iv. For purposes of determining water column targets for the development of effluent limits, TMDL targets, or water column targets for fishless waters, the fish tissue element may be translated to a water column value using a site-specific bioaccumulation factor (BAF) based on the ratio of total recoverable inorganic arsenic in fish muscle or fillet tissue to dissolved inorganic arsenic in the water column using the following equation:

$$WC_T (\mu g/L) = \frac{8.00 \mu g/kg}{BAF_{SS} L/kg}$$

Where:

$WC_T (\mu g/L)$  is the translated water column value; and

$BAF_{SS} L/kg$  is the site specific BAF calculated consistent with 210.03.e.v.

In fishless waters, surface water and fish tissue from the immediate downstream waters may be used for bioaccumulation modeling. In the absence of sufficient fish tissue data, the water column element is the applicable criterion element in fishless waters. ( )

v. When translating the fish tissue element to a water column value, the following procedures will be followed. ( )

(1) Data used to translate the fish tissue element must be based on current conditions and consistent with Subsections 210.03.e.i. and ii. ( )

(2) Whenever practical, fish tissue samples must be representative of the game fish species present within the waterbody and include game fish of legally harvestable size. In the absence of suitable game fish species, other resident fish species may be used. ( )

(3) Water column samples must be representative of the annual average concentration of dissolved inorganic arsenic at the site. ( )

(4) BAFs are calculated as a trophic-level weighted BAF or other scientifically defensible method for deriving protective BAF. ( )

Subsection 210.03.e. is not effective for CWA purposes until the date EPA issues written notification that the revisions in Docket No. 58-0102-2201 have been approved.