

IDAPA 58 – DEPARTMENT OF ENVIRONMENTAL QUALITY

58.01.02 – WATER QUALITY STANDARDS

DOCKET NO. 58-0102-1702

NOTICE OF RULEMAKING – PROPOSED RULE

AUTHORITY: In compliance with Section 67-5221(1), Idaho Code, notice is hereby given that this agency has initiated proposed rulemaking. This action is authorized by Sections 39-105, 39-107, and 39-3601 et seq., Idaho Code.

PUBLIC HEARING SCHEDULE: No hearings have been scheduled. Pursuant to Section 67-5222(2), Idaho Code, a public hearing will be held if requested in writing by twenty-five (25) persons, a political subdivision, or an agency. Written requests for a hearing must be received by the undersigned on or before August 18, 2017. If no such written request is received, a public hearing will not be held.

DESCRIPTIVE SUMMARY: This rulemaking has been initiated for administrative purposes and to revise Subsection 210.01, Criteria for Toxic Substances, by streamlining and reorganizing the table that contains criteria for protection of aquatic life and human health.

Administrative Revisions:

Water quality standards adopted and submitted to EPA since May 30, 2000, are not effective for federal Clean Water Act (CWA) purposes until EPA approves them (see [40 CFR 131.21](#)). This is known as the Alaska Rule. DEQ proposes to add a new rule section setting out a rulemaking process which would retain the existing rule that continues to be effective for CWA purposes until EPA approves the rule revisions. Using this rulemaking process will allow the regulated community to stay informed of the status of rules effective for CWA purposes.

In addition, the proposal will clean up the water quality standards by deleting obsolete language in two definitions and by deleting Subsection 401.03. Subsection 401.03 is no longer necessary because total chlorine residual was adopted into Section 210 during previous rulemaking.

Streamlining Subsection 210.01, Criteria for Toxic Substances:

The table in Subsection 210.01, Criteria for Toxic Substances, contains criteria for protection of aquatic life and human health. DEQ proposes to simplify and streamline the existing table by moving the information into two separate tables. One table will contain the criteria for protection of aquatic life and one table will contain the criteria for protection of human health. As part of this process, the existing table will be deleted.

By drafting two separate tables, Subsection 210.01 will become more manageable and easier to follow. The existing table contains approximately 100 rows for which there are no aquatic life criteria. By moving the criteria for aquatic life into a separate table, the aquatic life criteria table will become much shorter. In addition, the compounds listed in both tables will be arranged alphabetically.

The proposed revisions are for organizational purposes only and are not substantive. Even though the existing table is struck out and the information contained in the two tables is underlined, this is simply a duplication of information that currently exists in the water quality standards. All criteria values remain the same.

Idahoans that recreate in, drink from, or fish Idaho's surface waters, and any who discharge pollutants to those same waters, may be interested in commenting on this proposed rule. After consideration of public comments, DEQ intends to present the final proposal to the Board of Environmental Quality in the fall of 2017 for adoption of a pending rule. The rule is expected to be final and effective upon adjournment of the 2018 legislative session if adopted by the Board and approved by the Legislature.

INCORPORATION BY REFERENCE: Pursuant to Section 67-5229(2)(a), Idaho Code, the following is a brief synopsis of why the incorporation by reference is necessary: N/A

NEGOTIATED RULEMAKING: Negotiated rulemaking was not conducted. DEQ determined that negotiated rulemaking is not feasible due to the simple nature of this rulemaking. The proposed revisions are for administrative and organizational purposes and are not substantive.

IDAHO CODE SECTION 39-107D STATEMENT: This proposed rule does not regulate an activity not regulated by the federal government, nor is it broader in scope or more stringent than federal regulations.

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 when the pending rule will become effective: N/A

ASSISTANCE ON TECHNICAL QUESTIONS AND SUBMISSION OF WRITTEN COMMENTS: For assistance on technical questions concerning this rulemaking, contact Paula Wilson at paula.wilson@deq.idaho.gov, (208) 373-0418.

Anyone may submit written comments by mail, fax or email at the address below regarding this proposed rule. DEQ will consider all written comments received by the undersigned on or before September 1, 2017.

DATED this 2nd day of August, 2017.

Paula J. Wilson
Hearing Coordinator
Department of Environmental Quality
1410 N. Hilton
Boise, ID 83706-1255
Phone: (208) 373-0418
Fax: (208) 373-0481
paula.wilson@deq.idaho.gov

THE FOLLOWING IS THE PROPOSED TEXT OF DOCKET NO. 58-0102-1702
(Only Those Sections With Amendments Are Shown.)

007. EFFECTIVE FOR CLEAN WATER ACT PURPOSES.

Water quality standards adopted and submitted to EPA since May 30, 2000, are not effective for federal Clean Water Act (CWA) purposes until EPA approves them (see 40 CFR 131.21). This is known as the Alaska Rule. When making revisions to the Water Quality Standards, IDAPA 58.01.02, the Department shall retain the existing rule that continues to be effective for CWA purposes until the date EPA issues written notification that the rule revisions have been approved. Notations explaining the effectiveness of the rule sections shall be included along with the rule revisions. Upon the date EPA issues written notification that the rule revisions have been approved, the revised rule will become effective for CWA purposes and the previous rule and notations will be deleted from the Idaho Administrative Code. Information regarding the status of EPA review will be posted at <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>.

007~~8~~. -- 009. (RESERVED)

010. DEFINITIONS.

For the purpose of the rules contained in IDAPA 58.01.02, "Water Quality Standards," the following definitions apply: (4-11-06)

01. Activity. For purposes of antidegradation review, an activity that causes a discharge to a water subject to the jurisdiction of the Clean Water Act. (3-18-11)

02. Acute. A stimulus severe enough to induce a rapid response. In aquatic toxicity tests, acute refers to

a single or short-term (i.e., ninety-six (96) hours or less) exposure to a concentration of a toxic substance or effluent which results in death to fifty percent (50%) of the test organisms. When referring to human health, an acute effect is not always measured in terms of lethality. (3-30-07)

03. Acute Criteria. Unless otherwise specified in these rules, the maximum instantaneous or one (1) hour average concentration of a toxic substance or effluent which ensures adequate protection of sensitive species of aquatic organisms from acute toxicity due to exposure to the toxic substance or effluent. Acute criteria are expected to adequately protect the designated aquatic life use if not exceeded more than once every three (3) years. This is also known as the Criterion Maximum Concentration (CMC). There are no specific acute criteria for human health; however, the human health criteria are based on chronic health effects and are expected to adequately protect against acute effects. (3-30-07)

04. Aquatic Species. Any plant or animal that lives at least part of its life in the water column or benthic portion of waters of the state. (8-24-94)

05. Assigned Criteria. Criteria associated with beneficial uses from Section 100 of these rules. (3-18-11)

06. Background. The biological, chemical or physical condition of waters measured at a point immediately upstream (up-gradient) of the influence of an individual point or nonpoint source discharge. If several discharges to the water exist or if an adequate upstream point of measurement is absent, the Department will determine where background conditions should be measured. (8-24-94)

07. Basin Advisory Group. No less than one (1) advisory group named by the Director, in consultation with the designated agencies, for each of the state's six (6) major river basins which shall generally advise the Director on water quality objectives for each basin, work in a cooperative manner with the Director to achieve these objectives, and provide general coordination of the water quality programs of all public agencies pertinent to each basin. Each basin advisory group named by the Director shall reflect a balanced representation of the interests in the basin and shall, where appropriate, include representatives from each of the following: agriculture, mining, nonmunicipal point source discharge permittees, forest products, local government, livestock, Indian tribes (for areas within reservation boundaries), water-based recreation, and environmental interests. (3-20-97)

08. Beneficial Use. Any of the various uses which may be made of the water of Idaho, including, but not limited to, domestic water supplies, industrial water supplies, agricultural water supplies, navigation, recreation in and on the water, wildlife habitat, and aesthetics. The beneficial use is dependent upon actual use, the ability of the water to support a non-existing use either now or in the future, and its likelihood of being used in a given manner. The use of water for the purpose of wastewater dilution or as a receiving water for a waste treatment facility effluent is not a beneficial use. (8-24-94)

09. Best Management Practice. A practice or combination of practices, techniques or measures developed, or identified, by the designated agency and identified in the state water quality management plan which are determined to be the cost-effective and practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals. (3-20-97)

10. Bioaccumulation. The process by which a compound is taken up by, and accumulated in the tissues of an aquatic organism from the environment, both from water and through food. (8-24-94)

11. Bioaccumulative Pollutants. A compound with a bioaccumulation factor of greater than one thousand (1,000) or a bioconcentration factor of greater than one thousand (1,000). (4-11-15)

12. Biological Monitoring or Biomonitoring. The use of a biological entity as a detector and its response as a measure to determine environmental conditions. Toxicity tests and biological surveys, including habitat monitoring, are common biomonitoring methods. (8-24-94)

13. Board. The Idaho Board of Environmental Quality. (7-1-93)

14. Chronic. A stimulus that persists or continues for a long period of time relative to the life span of

an organism. In aquatic toxicity tests, chronic refers to continuous exposure to a concentration of a toxic substance or effluent which results in mortality, injury, reduced growth, impaired reproduction, or other adverse effect to aquatic organisms. The test duration is long enough that sub-lethal effects can be reliably measured. When referring to human health, a chronic effect is usually measured in terms of estimated changes in rates (# of cases/ 1000 persons) of illness over a lifetime of exposure. (3-30-07)

15. Chronic Criteria. Unless otherwise specified in these rules, the four (4) day average concentration of a toxic substance or effluent which ensures adequate protection of sensitive species of aquatic organisms from chronic toxicity due to exposure to the toxic substance or effluent. Chronic criteria are expected to adequately protect the designated aquatic life use if not exceeded more than once every three (3) years. This is also known as the Criterion Continuous Concentration (CCC). Human health chronic criteria are based on lifetime exposure. (3-30-07)

16. Compliance Schedule or Schedule Of Compliance. A schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard. (8-24-94)

17. Cost-Effective and Reasonable Best Management Practices (BMPs) for Nonpoint Sources. All approved BMPs specified in Subsections 350.03 and 055.07 of these rules. BMPs for activities not specified are, in accordance with Section 350, determined on a case-by-case basis. (3-18-11)

18. Daily Maximum (Minimum). The highest (lowest) value measured during one (1) calendar day or a twenty-four (24) hour period, as appropriate. For ambient monitoring of dissolved oxygen, pH, and temperature, multiple measurements should be obtained at intervals short enough that the difference between consecutive measurements around the daily maximum (minimum) is less than zero point two (0.2) ppm for dissolved oxygen, zero point one (0.1) SU for pH, or zero point five (0.5) degree C for temperature. (3-30-07)

19. Daily Mean. The average of at least two (2) appropriately spaced measurements, acceptable to the Department, calculated over a period of one (1) day: (3-20-97)

a. Confidence bounds around the point estimate of the mean may be required to determine the sample size necessary to calculate a daily mean; (8-24-94)

b. If any measurement is greater or less than five-tenths (0.5) times the average, additional measurements over the one-day period may be needed to obtain a more representative average; (3-20-97)

c. In calculating the daily mean for dissolved oxygen, values used in the calculation shall not exceed the dissolved oxygen saturation value. If a measured value exceeds the dissolved oxygen saturation value, then the dissolved oxygen saturation value will be used in calculating the daily mean. (8-24-94)

d. For ambient monitoring of temperature, the daily mean should be calculated from equally spaced measurements, at intervals such that the difference between any two (2) consecutive measurements does not exceed one point zero (1.0) degree C. (3-30-07)

20. Degradation or Lower Water Quality. "Degradation" or "lower water quality" means, for purposes of antidegradation review, a change in a pollutant that is adverse to designated or existing uses, as calculated for a new point source, and based upon monitoring or calculated information for an existing point source increasing its discharge. Such degradation shall be calculated or measured after appropriate mixing of the discharge and receiving water body. (3-29-12)

21. Deleterious Material. Any nontoxic substance which may cause the tainting of edible species of fish, taste and odors in drinking water supplies, or the reduction of the usability of water without causing physical injury to water users or aquatic and terrestrial organisms. (8-24-94)

22. Department. The Idaho Department of Environmental Quality. (7-1-93)

23. Design Flow. The critical flow used for steady-state wasteload allocation modeling. (8-24-94)

- 24. Designated Agency.** The department of lands for timber harvest activities, oil and gas exploration and development, and mining activities; the soil conservation commission for grazing and agricultural activities; the transportation department for public road construction; the department of agriculture for aquaculture; and the Department's division of environmental quality for all other activities. (3-20-97)
- 25. Designated Beneficial Use or Designated Use.** Those beneficial uses assigned to identified waters in Idaho Department of Environmental Quality Rules, IDAPA 58.01.02, "Water Quality Standards ~~and Wastewater Treatment Requirements~~," Sections 110 through 160, whether or not the uses are being attained. (4-5-00)()
- 26. Desirable Species.** Species indigenous to the area or those introduced species identified as desirable by the Idaho Department of Fish and Game. (3-15-02)
- 27. Director.** The Director of the Idaho Department of Environmental Quality or his authorized agent. (7-1-93)
- 28. Discharge.** When used without qualification, any spilling, leaking, emitting, escaping, leaching, or disposing of a pollutant into the waters of the state. For purposes of antidegradation review, means "discharge" as used in Section 401 of the Clean Water Act. (3-18-11)
- 29. Dissolved Oxygen (DO).** The measure of the amount of oxygen dissolved in the water, usually expressed in mg/l. (7-1-93)
- 30. Dissolved Product.** Petroleum product constituents found in solution with water. (8-24-94)
- 31. Dynamic Model.** A computer simulation model that uses real or derived time series data to predict a time series of observed or derived receiving water concentrations. Dynamic modeling methods include continuous simulation, Monte Carlo simulations, lognormal probability modeling, or other similar statistical or deterministic techniques. (8-24-94)
- 32. E. coli (Escherichia coli).** A common fecal and intestinal organism of the coliform group of bacteria found in warm-blooded animals. (4-5-00)
- 33. Effluent.** Any wastewater discharged from a treatment facility. (7-1-93)
- 34. Effluent Biomonitoring.** The measurement of the biological effects of effluents (e.g., toxicity, biostimulation, bioaccumulation, etc.). (8-24-94)
- 35. EPA.** The United States Environmental Protection Agency. (7-1-93)
- 36. Ephemeral Waters.** A stream, reach, or water body that flows naturally only in direct response to precipitation in the immediate watershed and whose channel is at all times above the water table. (4-11-06)
- 37. Existing Activity or Discharge.** An activity or discharge that has been previously authorized or did not previously require authorization. (3-18-11)
- 38. Existing Beneficial Use Or Existing Use.** Those beneficial uses actually attained in waters on or after November 28, 1975, whether or not they are designated for those waters in Idaho Department of Environmental Quality Rules, IDAPA 58.01.02, "Water Quality Standards." (4-11-06)
- 39. Facility.** As used in Section 850 only, any building, structure, installation, equipment, pipe or pipeline, well pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock or aircraft, area, place or property from which an unauthorized release of hazardous materials has occurred. (8-24-94)
- 40. Four Day Average.** The average of all measurements within a period of ninety-six (96) consecutive hours. While a minimum of one (1) measurement per each twenty-four (24) hours is preferred, for toxic chemicals in Section 210, any number of data points is acceptable. (3-30-07)

41. Free Product. A petroleum product that is present as a nonaqueous phase liquid. Free product includes the presence of petroleum greater than one-tenth (0.1) inch as measured on the water surface for surface water or the water table for ground water. (7-1-93)

42. Full Protection, Full Support, or Full Maintenance of Designated Beneficial Uses of Water. Compliance with those levels of water quality criteria listed in Sections 200, 210, 250, 251, 252, 253, and 275 (if applicable) or where no major biological group such as fish, macroinvertebrates, or algae has been modified by human activities significantly beyond the natural range of the reference streams or conditions approved by the Director in consultation with the appropriate basin advisory group. (3-15-02)

43. General Permit. An NPDES permit issued by the U.S. Environmental Protection Agency authorizing a category of discharges under the federal Clean Water Act or a nationwide or regional permit issued by the U.S. Army Corps of Engineers under the federal Clean Water Act. (3-29-12)

44. Geometric Mean. The geometric mean of “n” quantities is the “nth” root of the product of the quantities. (7-1-93)

45. Ground Water. Any water of the state which occurs beneath the surface of the earth in a saturated geological formation of rock or soil. (3-30-07)

46. Harmonic Mean. The number of daily measurements divided by the sum of the reciprocals of the measurements (i.e., the reciprocal of the mean of reciprocals). (3-25-16)

47. Hazardous Material. A material or combination of materials which, when discharged in any quantity into state waters, presents a substantial present or potential hazard to human health, the public health, or the environment. Unless otherwise specified, published guides such as Quality Criteria for Water (1976) by EPA, Water Quality Criteria (Second Edition, 1963) by the state of California Water Quality Control Board, their subsequent revisions, and more recent research papers, regulations and guidelines will be used in identifying individual and specific materials and in evaluating the tolerances of the identified materials for the beneficial uses indicated. (7-1-93)

48. Highest Statutory and Regulatory Requirements for Point Sources. All applicable effluent limits required by the Clean Water Act and other permit conditions. It also includes any compliance schedules or consent orders requiring measures to achieve applicable effluent limits and other permit conditions required by the Clean Water Act. (3-18-11)

49. Hydrologic Unit Code (HUC). A unique eight (8) digit number identifying a subbasin. A subbasin is a United States Geological Survey cataloging unit comprised of water body units. (4-5-00)

50. Hydrologically-Based Design Flow. A statistically derived receiving water design flow based on the selection and identification of an extreme value (e.g., 1Q10, 7Q10). The underlying assumption is that the design flow will occur X number of times in Y years, and limits the number of years in which one (1) or more excursions below the design flow can occur. (8-24-94)

51. Hypolimnion. The bottom layer in a thermally-stratified body of water. It is fairly uniform in temperature and lays beneath a zone of water which exhibits a rapid temperature drop with depth such that mixing with overlying water is inhibited. (3-30-07)

52. Integrated Report. Refers to the consolidated listing and reporting of the state’s water quality status pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act. (3-18-11)

53. Inter-Departmental Coordination. Consultation with those agencies responsible for enforcing or administering the practices listed as approved best management practices in Subsection 350.03. (7-1-93)

54. Intermittent Waters. A stream, reach, or water body which naturally has a period of zero (0) flow for at least one (1) week during most years. Where flow records are available, a stream with a 7Q2 hydrologically-based unregulated flow of less than one-tenth (0.1) cubic feet per second (cfs) is considered intermittent. Streams

with natural perennial pools containing significant aquatic life uses are not intermittent. (4-11-06)

55. Load Allocation (LA). The portion of a receiving water's loading capacity that is attributed either to one (1) of its existing or future nonpoint sources of pollution or to natural background sources. (8-24-94)

56. Loading Capacity. The greatest amount of pollutant loading that a water can receive without violating water quality standards. (8-24-94)

57. Lowest Observed Effect Concentration (LOEC). The lowest concentration of a toxic substance or an effluent that results in observable adverse effects in the aquatic test population. (3-30-07)

58. Man-Made Waterways. Canals, flumes, ditches, wasteways, drains, laterals, and/or associated features, constructed for the purpose of water conveyance. This may include channels modified for such purposes prior to November 28, 1975. These waterways may have uniform and rectangular cross-sections, straight channels, follow rather than cross topographic contours, be lined to reduce water loss, and be operated or maintained to promote water conveyance. (3-30-07)

59. Maximum Weekly Maximum Temperature (MWMT). The weekly maximum temperature (WMT) is the mean of daily maximum temperatures measured over a consecutive seven (7) day period ending on the day of calculation. When used seasonally, e.g., spawning periods, the first applicable WMT occurs on the seventh day into the time period. The MWMT is the single highest WMT that occurs during a given year or other period of interest, e.g., a spawning period. (3-30-07)

60. Milligrams Per Liter (mg/l). Milligrams of solute per liter of solution, equivalent to parts per million, assuming unit density. (7-1-93)

61. Mixing Zone. A defined area or volume of the receiving water surrounding or adjacent to a wastewater discharge where the receiving water, as a result of the discharge, may not meet all applicable water quality criteria or standards. It is considered a place where wastewater mixes with receiving water and not as a place where effluents are treated. (7-1-93)

62. National Pollutant Discharge Elimination System (NPDES). Point source permitting program established pursuant to Section 402 of the federal Clean Water Act. (8-24-94)

63. Natural Background Conditions. The physical, chemical, biological, or radiological conditions existing in a water body without human sources of pollution within the watershed. Natural disturbances including, but not limited to, wildfire, geologic disturbance, diseased vegetation, or flow extremes that affect the physical, chemical, and biological integrity of the water are part of natural background conditions. Natural background conditions should be described and evaluated taking into account this inherent variability with time and place. (3-30-07)

64. Nephelometric Turbidity Units (NTU). A measure of turbidity based on a comparison of the intensity of the light scattered by the sample under defined conditions with the intensity of the light scattered by a standard reference suspension under the same conditions. (8-24-94)

65. New Activity or Discharge. An activity or discharge that has not been previously authorized. Existing activities or discharges not currently permitted or licensed will be presumed to be new unless the Director determines to the contrary based on review of available evidence. An activity or discharge that has previously taken place without need for a license or permit is not a new activity or discharge when first licensed or permitted. (3-18-11)

66. Nonpoint Source Activities. Activities on a geographical area on which pollutants are deposited or dissolved or suspended in water applied to or incident on that area, the resultant mixture being discharged into the waters of the state. Nonpoint source activities on ORWs do not include issuance of water rights permits or licenses, allocation of water rights, operation of diversions, or impoundments. Nonpoint sources activities include, but are not limited to: (3-20-97)

a. Irrigated and nonirrigated lands used for: (7-1-93)

- i. Grazing; (7-1-93)
 - ii. Crop production; (7-1-93)
 - iii. Silviculture; (7-1-93)
 - b. Log storage or rafting; (7-1-93)
 - c. Construction sites; (7-1-93)
 - d. Recreation sites; (3-20-97)
 - e. Septic tank disposal fields. (8-24-94)
 - f. Mining; (3-20-97)
 - g. Runoff from storms or other weather related events; and (3-20-97)
 - h. Other activities not subject to regulation under the federal national pollutant discharge elimination system. (3-20-97)
- 67. Nuisance.** Anything which is injurious to the public health or an obstruction to the free use, in the customary manner, of any waters of the state. (7-1-93)
- 68. Nutrients.** The major substances necessary for the growth and reproduction of aquatic plant life, consisting of nitrogen, phosphorus, and carbon compounds. (7-1-93)
- 69. One Day Minimum.** The lowest daily instantaneous value measured. (3-20-97)
- 70. One Hour Average.** The mean of at least two (2) appropriately spaced measurements, as determined by the Department, calculated over a period of one (1) hour. When three (3) or more measurements have been taken, and if any measurement is greater or less than five-tenths (0.5) times the mean, additional measurements over the one-hour period may be needed to obtain a more representative mean. (3-20-97)
- 71. Operator.** For purposes of Sections 851 and 852, any person presently or who was at any time during a release in control of, or having responsibility for, the daily operation of the petroleum storage tank (PST) system. (4-2-03)
- 72. Outstanding Resource Water (ORW).** A high quality water, such as water of national and state parks and wildlife refuges and water of exceptional recreational or ecological significance, which has been designated by the legislature and subsequently listed in this chapter. ORW constitutes an outstanding national or state resource that requires protection from point and nonpoint source activities that may lower water quality. (3-20-97)
- 73. Owner.** For purposes of Sections 851 and 852, any person who owns or owned a petroleum storage tank (PST) system any time during a release and the current owner of the property where the PST system is or was located. (4-2-03)
- 74. Permit or License.** A permit or license for an activity that is subject to certification by the state under Section 401 of the Clean Water Act, including, for example, NPDES permits, dredge and fill permits, and FERC licenses. (3-18-11)
- 75. Person.** An individual, public or private corporation, partnership, association, firm, joint stock company, joint venture, trust, estate, state, municipality, commission, political subdivision of the state, state or federal agency, department or instrumentality, special district, interstate body or any legal entity, which is recognized by law as the subject of rights and duties. (3-20-97)
- 76. Petroleum Products.** Products derived from petroleum through various refining processes.

(7-1-93)

77. Petroleum Storage Tank (PST) System. Any one (1) or combination of storage tanks or other containers, including pipes connected thereto, dispensing equipment, and other connected ancillary equipment, and stationary or mobile equipment, that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances. (7-1-93)

78. Point Source. Any discernible, confined, and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture, discharges from dams and hydroelectric generating facilities or any source or activity considered a nonpoint source by definition. (7-1-93)

79. Pollutant. Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical waste, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, silt, cellar dirt; and industrial, municipal and agricultural waste, gases entrained in water; or other materials which, when discharged to water in excessive quantities, cause or contribute to water pollution. Provided however, biological materials shall not include live or occasional dead fish that may accidentally escape into the waters of the state from aquaculture facilities. (3-20-97)

80. Project Plans. Documents which describe actions to be taken under a proposed activity. These documents include environmental impact statements, environmental assessments, and other land use or resource management plans. (7-1-93)

81. Public Swimming Beaches. Areas indicated by features such as signs, swimming docks, diving boards, slides, or the like, boater exclusion zones, map legends, collection of a fee for beach use, or any other unambiguous invitation to public swimming. Privately owned swimming docks or the like which are not open to the general public are not included in this definition. (4-11-06)

82. Receiving Waters. Those waters which receive pollutants from point or nonpoint sources. (7-1-93)

83. Reference Stream or Condition. A water body which represents the minimum conditions necessary to fully support the applicable designated beneficial uses as further specified in these rules, or natural conditions with few impacts from human activities and which are representative of the highest level of support attainable in the basin. In highly mineralized areas or in the absence of such reference streams or water bodies, the Director, in consultation with the basin advisory group and the technical advisors to it, may define appropriate hypothetical reference conditions or may use monitoring data specific to the site in question to determine conditions in which the beneficial uses are fully supported. (3-20-97)

84. Release. Any unauthorized spilling, leaking, emitting, discharging, escaping, leaching, or dispositive into soil, ground water, or surface water. (8-24-94)

85. Resident Species. Those species that commonly occur in a site including those that occur only seasonally or intermittently. This includes the species, genera, families, orders, classes, and phyla that: (8-24-94)

a. Are usually present at the site; (8-24-94)

b. Are present only seasonally due to migration; (8-24-94)

c. Are present intermittently because they periodically return or extend their ranges into the site; (8-24-94)

d. Were present at the site in the past but are not currently due to degraded conditions, and are expected to be present at the site when conditions improve; and (8-24-94)

e. Are present in nearby bodies of water but are not currently present at the site due to degraded conditions, and are expected to be present at the site when conditions improve. (8-24-94)

- 86. Responsible Persons in Charge.** Any person who: (8-24-94)
- a.** By any acts or omissions, caused, contributed to or exacerbated an unauthorized release of hazardous materials; (8-24-94)
- b.** Owns or owned the facility from which the unauthorized release occurred and the current owner of the property where the facility is or was located; or (8-24-94)
- c.** Presently or who was at any time during an unauthorized release in control of, or had responsibility for, the daily operation of the facility from which an unauthorized release occurred. (8-24-94)
- 87. Sediment.** Undissolved inorganic matter. (3-30-07)
- 88. Seven Day Mean.** The average of the daily mean values calculated over a period of seven (7) consecutive days. (3-20-97)
- 89. Sewage.** The water-carried human or animal waste from residences, buildings, industrial establishments or other places, together with such ground water infiltration and surface water as may be present. (8-24-94)
- 90. Short-Term or Temporary Activity.** An activity which is as short as possible but lasts for no more than one (1) year, is limited in scope and is expected to have only minimal impact on water quality as determined by the Director. Short-term or temporary activities include, but are not limited to, those activities described in Subsection 080.02. (3-30-07)
- 91. Silviculture.** Those activities associated with the regeneration, growing and harvesting of trees and timber including, but not limited to, disposal of logging slash, preparing sites for new stands of trees to be either planted or allowed to regenerate through natural means, road construction and road maintenance, drainage of surface water which inhibits tree growth or logging operations, fertilization, application of herbicides or pesticides, all logging operations, and all forest management techniques employed to enhance the growth of stands of trees or timber. (3-20-97)
- ~~**92. Sludge.** The semi-liquid mass produced by partial dewatering of potable or spent process waters or wastewater. (7-1-93)~~
- 93. Specialized Best Management Practices.** Those practices designed with consideration of geology, land type, soil type, erosion hazard, climate and cumulative effects in order to fully protect the beneficial uses of water, and to prevent or reduce the pollution generated by nonpoint sources. (3-3-87)
- 94. State.** The state of Idaho. (7-1-93)
- 95. State Water Quality Management Plan.** The state management plan developed and updated by the Department in accordance with Sections 205, 208, and 303 of the Clean Water Act. (3-20-97)
- 96. Suspended Sediment.** The undissolved inorganic fraction of matter suspended in surface water. (3-30-07)
- 97. Suspended Solids.** The undissolved organic and inorganic matter suspended in surface water. (3-30-07)
- 98. Technology-Based Effluent Limitation.** Treatment requirements under Section 301(b) of the Clean Water Act that represent the minimum level of control that must be imposed in a permit issued under Section 402 of the Clean Water Act. (8-24-94)
- 99. Thermal Shock.** A rapid temperature change that causes aquatic life to become disoriented or more susceptible to predation or disease. (4-11-15)

10099. **Total Maximum Daily Load (TMDL).** The sum of the individual wasteload allocations (WLAs) for point sources, load allocations (LAs) for nonpoint sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. (8-24-94)

1010. **Toxicity Test.** A procedure used to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of response of an exposed test organism to a specific chemical or effluent. (8-24-94)

1021. **Toxic Substance.** Any substance, material or disease-causing agent, or a combination thereof, which after discharge to waters of the State and upon exposure, ingestion, inhalation or assimilation into any organism (including humans), either directly from the environment or indirectly by ingestion through food chains, will cause death, disease, behavioral abnormalities, malignancy, genetic mutation, physiological abnormalities (including malfunctions in reproduction) or physical deformations in affected organisms or their offspring. Toxic substances include, but are not limited to, the one hundred twenty-six (126) priority pollutants identified by EPA pursuant to Section 307(a) of the federal Clean Water Act. (8-24-94)

1032. **Treatment.** A process or activity conducted for the purpose of removing pollutants from wastewater. (7-1-93)

1043. **Treatment System.** Any physical facility or land area for the purpose of collecting, treating, neutralizing or stabilizing pollutants including treatment by disposal plants, the necessary intercepting, outfall and outlet sewers, pumping stations integral to such plants or sewers, equipment and furnishing thereof and their appurtenances. A treatment system may also be known as a treatment facility. (4-11-06)

1054. **Twenty-Four Hour Average.** The mean of at least two (2) appropriately spaced measurements, as determined by the Department, calculated over a period of twenty-four (24) consecutive hours. When three (3) or more measurements have been taken, and if any measurement is greater or less than five-tenths (0.5) times the mean, additional measurements over the twenty-four (24)-hour period may be needed to obtain a more representative mean. (3-20-97)

1065. **Unique Ecological Significance.** The attribute of any stream or water body which is inhabited or supports an endangered or threatened species of plant or animal or a species of special concern identified by the Idaho Department of Fish and Game, which provides anadromous fish passage, or which provides spawning or rearing habitat for anadromous or desirable species of lake dwelling fishes. (8-24-94)

1076. **Use Attainability Analysis.** A structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in Subsection 102.02.a. (3-25-16)

1087. **Wasteload Allocation (WLA).** The portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. (8-24-94)

1098. **Wastewater.** Unless otherwise specified, sewage, industrial waste, agricultural waste, and associated solids or combinations of these, whether treated or untreated, together with such water as is present. (7-1-93)

1109. **Water Body Unit.** Includes all named and unnamed tributaries within a drainage and is considered a single unit unless designated otherwise. (4-5-00)

1110. **Water Pollution.** Any alteration of the physical, thermal, chemical, biological, or radioactive properties of any waters of the state, or the discharge of any pollutant into the waters of the state, which will or is likely to create a nuisance or to render such waters harmful, detrimental or injurious to public health, safety or welfare, or to fish and wildlife, or to domestic, commercial, industrial, recreational, aesthetic, or other beneficial uses. (8-24-94)

1121. Water Quality-Based Effluent Limitation. An effluent limitation that refers to specific levels of water quality that are expected to render a body of water suitable for its designated or existing beneficial uses.

(8-24-94)

1132. Water Quality Limited Water Body. After monitoring, evaluation of required pollution controls, and consultation with the appropriate basin and watershed advisory groups, a water body identified by the Department, which does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards after the application of required pollution controls. A water body identified as water quality limited shall require the development of a TMDL or other equivalent process in accordance with Section 303 of the Clean Water Act and Sections 39-3601 et seq., Idaho Code.

(3-20-97)

1143. Waters and Waters Of The State. All the accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof which are wholly or partially within, which flow through or border upon the state.

(7-1-93)

1154. Watershed. The land area from which water flows into a stream or other body of water which drains the area.

(3-20-97)

1165. Watershed Advisory Group. An advisory group appointed by the Director, with the advice of the appropriate Basin Advisory Group, which will recommend to the Department those specific actions needed to control point and nonpoint sources of pollution affecting water quality limited water bodies within the watershed. Members of each watershed advisory group shall be representative of the industries and interests affected by the management of that watershed, along with representatives of local government and the land managing or regulatory agencies with an interest in the management of that watershed and the quality of the water bodies within it.

(3-20-97)

1176. Whole-Effluent Toxicity. The aggregate toxic effect of an effluent measured directly with a toxicity test.

(8-24-94)

1187. Zone of Initial Dilution (ZID). An area within a Department authorized mixing zone where acute criteria may be exceeded. This area shall be no larger than necessary and shall be sized to prevent lethality to swimming or drifting organisms by ensuring that organisms are not exposed to concentrations exceeding acute criteria for more than one (1) hour more than once in three (3) years. The actual size of the ZID will be determined by the Department for a discharge on a case-by-case basis, taking into consideration mixing zone modeling and associated size recommendations and any other pertinent chemical, physical, and biological data available.

(4-11-15)

(BREAK IN CONTINUITY OF SECTIONS)

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

Note: In 2016, Idaho updated human health criteria for 104 toxic substances (10 of which are new). Final rule submitted to EPA on December 13, 2016 (docket 58-0102-1201). Until EPA approves the revisions in this rule docket, the human health criteria published in [2005 Idaho Administrative Code](#) in Subsection 210.01 continue to apply and are effective for CWA purposes. These criteria are listed in [Numeric Criteria for Toxic Substances \(2005\)](#). The previous human health criteria based on a fish consumption rate of 6.5 g/day published in [2005 Idaho Administrative Code](#) in Subsection 210.05.b.i. continue to apply and are effective for CWA purposes. Until EPA approves the revisions in this rule docket, the additional fish-plus-water criterion for copper; the revisions in Subsections 070.08, 210.03, 210.04, 210.05.b.ii. and 400.06; and the definition of harmonic mean published in [2015 Idaho Administrative Code](#) continue to apply and are effective for CWA purposes. For more information, go to <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>.

- ~~01. Criteria for Toxic Substances. The criteria of Section 210 apply to surface waters of the state as follows: (5-3-03)~~
- ~~a. Columns B1 and B2 of the following table apply to waters designated for aquatic life use. (3-25-16)~~
- ~~b. Column C2 of the following table applies to waters designated for primary or secondary contact recreation use. (3-25-16)~~
- ~~c. Column C1 of the following table applies to waters designated for domestic water supply use.~~

A		B Aquatic life			C Human health for consumption of:		
(Number) Compound	^a -CAS Number	^b -CMC (µg/L)	^b -CCC (µg/L)	Carcinogen?	Water & fish (µg/L)		Fish only (µg/L)
		B1	B2		C1	C2	
1 Antimony	7440360				5.2	ε	100 ε
2 Arsenic	7440382	340 e	150 e	Y	10	dfq	10 dfq
<p><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 2016, 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. Until new criteria are adopted, EPA will use criteria of 6.2 µg/L for exposure through fish consumption only and 0.02 µg/L for exposure through both drinking water + consumption of fish in its NPDES permitting actions. These criteria are published in 1996 Idaho Administrative Code (Subsections 250.01.c, 250.02.a.iv, 250.03.a.i). For more information, go to http://www.deq.idaho.gov/epa-actions-on-proposed-standards.</i></p>							
3 Beryllium	7440417					h	h
4 Cadmium	7440439	1.3 i	0.6 i			h	h
5a Chromium-III	16065834	570 i	74 i			h	h
5b Chromium-VI	18540299	46 e	41 e			h	h
6 Copper	7440508	17 i	11 i		1,300	q	
7 Lead	7439924	65 i	2.5 i			h	h
8a Mercury	7439976		g	g			
<p><i>Note: In 2005, Idaho adopted EPA's recommended methylmercury fish tissue criterion for protection of human health (docket 58-0102-0302). The decision was made to remove the old tissue-based aquatic life criteria and rely on the fish tissue criterion to provide protection for aquatic life as well as human health. Thus, current Idaho water quality standards do not have mercury water column criteria for the protection of aquatic life. While EPA approved Idaho's adoption of the fish tissue criterion in September 2005, it had withheld judgment on Idaho's removal of aquatic life criteria. On December 12, 2008, EPA disapproved Idaho's removal of the old aquatic life criteria. The water column criteria for total recoverable mercury published in 2004 Idaho Administrative Code continue to apply and are effective for CWA purposes. For more information go to http://www.deq.idaho.gov/epa-actions-on-proposed-standards.</i></p>							
8b Methylmercury	22967926						0.3 mg/kg p
9 Nickel	7440020	470 i	52 i		58	ε	100 ε

A		B Aquatic life				C Human health for consumption of:			
(Number)-Compound	^a -CAS-Number	^b -CMC	^b -CCC	Carcinogen?	Water & fish-		Fish-only		
		(µg/L)	(µg/L)		(µg/L)	(µg/L)			
		B1	B2		C1		C2		
10 Selenium	7782492	20 f	5 f		29	ε	250	ε	
11 Silver	7440224	3.4 i							
12 Thallium	7440280				0.017	ε	0.023	ε	
13 Zinc	7440666	120 i	120 i		870	ε	1,500	ε	
14 Cyanide	57125	22 j	5.2 j		3.9	ε	140	ε	
15 Asbestos	1332214				7,000,000- fibers/L	q			
16 2,3,7,8-TCDD-Dioxin	1746016			Y	1.8E-08	el	1.9E-08	el	
17 Acrolein	107028				3.2	ε	120	ε	
18 Acrylonitrile	107131			Y	0.60	el	22	el	
19 Benzene	71432				3.0	el	28	ε	
20 Bromoform	75252			Y	62	el	380	el	
21 Carbon Tetrachloride	56235			Y	3.6	el	15	el	
22 Chlorobenzene	108907				89	ε	270	ε	
23 Chlorodibromomethane	124481			Y	7.4	el	67	el	
24 Chloroethane	75003					h		h	
25 2-Chloroethylvinyl Ether	110758					h		h	
26 Chloroform	67663				61	ε	730	ε	
27 Dichlorobromomethane	75274			Y	8.8	el	86	el	
28 1,1-Dichloroethane	75343					h		h	
29 1,2-Dichloroethane	107062			Y	96	el	2,000	el	
30 1,1-Dichloroethylene	75354				310	ε	5,200	ε	
31 1,2-Dichloropropane	78875			Y	8.5	el	98	el	
32 1,3-Dichloropropene	542756			Y	2.5	el	38	el	
33 Ethylbenzene	100414				32	ε	—41	ε	
34 Methyl Bromide	74839				130	ε	3,700	ε	
35 Methyl Chloride	74873					h		h	
36 Methylene Chloride	75092				38	ε	960	ε	
37 1,1,2,2-Tetrachloroethane	79345			Y	1.4	el	8.6	el	

A		B Aquatic life			C Human health for consumption of:				
(Number)-Compound	^a -CAS- Number	^b -CMC (µg/L)	^b -CCC (µg/L)	Carcinogen?	Water & fish- (µg/L)		Fish-only (µg/L)		
		B1	B2		C1	C2			
38	Tetrachloroethylene	127184				15	ε	23	ε
39	Toluene	108883				47	ε	170	ε
40	1,2-Trans-Dichloroethylene	156605				120	ε	1,200	ε
41	1,1,1-Trichloroethane	71556				11,000	ε	56,000	ε
42	1,1,2-Trichloroethane	79005			Y	4.9	el	29	el
43	Trichloroethylene	79016				2.6	ε	11	ε
44	Vinyl Chloride	75014			Y	0.21	el	5.0	el
45	2-Chlorophenol	95578				30	ε	260	ε
46	2,4-Dichlorophenol	120832				9.6	ε	19	ε
47	2,4-Dimethylphenol	105679				110	ε	820	ε
48	2-Methyl-4,6-Dinitrophenol	534521				1.6	ε	8.6	ε
49	2,4-Dinitrophenol	51285				12	ε	110	ε
50	2-Nitrophenol	88755					h		h
51	4-Nitrophenol	100027					h		h
52	3-Methyl-4-Chlorophenol	59507				350	ε	750	ε
53	Pentachlorophenol	87865	20 m	13 m	Y	0.11	el	0.12	el
54	Phenol	108952				3,800	ε	85,000	ε
55	2,4,6-Trichlorophenol	88062				1.5	ε	2.0	ε
56	Acenaphthene	83329				26	ε	28	ε
57	Acenaphthylene	208968					h		h
58	Anthracene	120127				110	ε	120	ε
59	Benzidine	92875			Y	0.0014	el	0.033	el
60	Benzo(a)Anthracene	56553			Y	0.0042	el	0.0042	el
61	Benzo(a)Pyrene	50328			Y	0.00042	el	0.00042	el
62	Benzo(b)Fluoranthene	205992			Y	0.0042	el	0.0042	el
63	Benzo(ghi)Perylene	191242					h		h
64	Benzo(k)Fluoranthene	207089			Y	0.042	el	0.042	el

A		B Aquatic life			C Human health for consumption of:	
(Number)-Compound	^a -CAS-Number	^b -CMC	^b -CCC	Carcinogen?	Water & fish-	Fish-only
		(µg/L)	(µg/L)		(µg/L)	(µg/L)
		B1	B2		C1	C2
65	Bis(2-Chloroethoxy)-Methane	111911			h	h
66	Bis(2-Chloroethyl)Ether	111444		Y	0.29 el	6-8 el
67	Bis(2-Chloroisopropyl)-Ether	108601			220 e	1,200 e
68	Bis(2-Ethylhexyl)-Phthalate	117817		Y	1.2 el	1.2 el
69	4-Bromophenyl Phenyl-Ether	101553			h	h
70	Butylbenzyl-Phthalate	85687			0.33 e	0.33 e
71	2-Chloronaphthalene	91587			330 e	380 e
72	4-Chlorophenyl Phenyl-Ether	7005723			h	h
73	Chrysene	218019		Y	0.42 el	0.42 el
74	Dibenzo (a,h)-Anthracene	53703		Y	0.00042 el	0.00042 el
75	1,2-Dichlorobenzene	95501			700 e	1,100 e
76	1,3-Dichlorobenzene	541731			3.5 e	4.8 e
77	1,4-Dichlorobenzene	106467			180 e	300 e
78	3,3'-Dichlorobenzidine	91941		Y	0.29 el	0.48 el
79	Diethyl-Phthalate	84662			200 e	210 e
80	Dimethyl-Phthalate	131113			600 e	600 e
81	Di-n-Butyl-Phthalate	84742			8.2 e	8.3 e
82	2,4-Dinitrotoluene	121142		Y	0.46 el	5.5 el
83	2,6-Dinitrotoluene	606202			h	h
84	Di-n-Octyl-Phthalate	117840			h	h
85	1,2-Diphenylhydrazine	122667		Y	0.25 el	0.65 el
86	Fluoranthene	206440			6.3 e	6.4 e
87	Fluorene	86737			24 e	22 e
88	Hexachlorobenzene	118741		Y	0.00026 el	0.00026 el
89	Hexachlorobutadiene	87683		Y	0.031 el	0.031 el

A		B Aquatic life			C Human health for consumption of:				
(Number)-Compound	^a -CAS-Number	^b -CMC	^b -CCC	Carcinogen?	Water & fish-		Fish-only		
		(µg/L) B1	(µg/L) B2		(µg/L) C1	(µg/L) C2			
90	Hexachloro-cyclopentadiene	77474				1.3	ε	1.3	ε
91	Hexachloroethane	67721				0.23	ε	0.24	ε
92	Ideno (1,2,3-cd)-Pyrene	193395			Y	0.0042	el	0.0042	el
93	Isophorone	78594			Y	330	el	6,000	el
94	Naphthalene	91203					h		h
95	Nitrobenzene	98953				12	ε	180	ε
96	N-Nitrosodimethylamine	62759			Y	0.0065	el	9.1	el
97	N-Nitrosodi-n-Propylamine	621647			Y	0.046	el	1.5	el
98	N-Nitrosodiphenylamine	86306			Y	3.14	el	18	el
99	Phenanthrene	85018					h		h
100	Pyrene	129000				8.1	ε	8.4	ε
101	1,2,4-Trichlorobenzene	120821				0.24	ε	0.24	ε
102	Aldrin	309002	3		Y	2.5E-06	el	2.5E-06	el
103	alpha-BHC	319846			Y	0.0012	el	0.0013	el
104	beta-BHC	319857			Y	0.036	el	0.045	el
105	gamma-BHC (Lindane)	58899	2	0.08		1.4	ε	1.4	ε
106	delta-BHC	319868					h		h
107	Chlordane	57749	2.4	0.0043	Y	0.0010	el	0.0010	el
108	4,4'-DDT	50293	1.1	0.001	Y	9.8E-05	el	9.8E-05	el
109	4,4'-DDE	72559			Y	5.5E-05	el	5.5E-05	el
110	4,4'-DDD	72548			Y	0.00042	el	0.00042	el
111	Dieldrin	60571	2.5	0.0019	Y	4.2E-06	el	4.2E-06	el
112	alpha-Endosulfan	959988	0.22	0.056		7.0	ε	8.5	ε
113	beta-Endosulfan	33213659	0.22	0.056		11	ε	14	ε
114	Endosulfan-Sulfate	1031078				9.9	ε	13	ε
115	Endrin	72208	0.18	0.0023		0.011	ε	0.011	ε
116	Endrin-Aldehyde	7421934				0.38	ε	0.40	ε
117	Heptachlor	76448	0.52	0.0038	Y	2.0E-05	el	2.0E-05	el

A		B Aquatic life			C Human health for consumption of:					
(Number)-Compound	^a -CAS-Number	^b -CMC (µg/L)	^b -CCC (µg/L)	Carcinogen?	Water & fish- (µg/L)		Fish-only (µg/L)			
		B1	B2		C1	C2				
118	Heptachlor-Epoxide	4024573	0.52	0.0038	Y	0.00010	el	0.00010	el	
119	Polychlorinated-Biphenyls-PCBs:	n		0.014	n	Y	0.00019	elo	0.00019	elo
120	Toxaphene	8001352	0.73	0.0002	Y	0.0023	el	0.0023	el	
121	Chlorine		19 k	11 k						
122	1,2,4,5-Tetrachlorobenzene	95943				0.0093	e	0.0094	e	
123	2,4,5-Trichlorophenol	95954				140	e	190	e	
124	Bis-(Chloromethyl)-Ether	542881			Y	0.0015	el	0.055	el	
125	Chlorophenoxy-Herbicide (2,4,5-TP)-[Silvex]	93721				82	e	130	e	
126	Chlorophenoxy-Herbicide (2,4-D)	94757				1,000	e	3,900	e	
127	Dinitrophenols	25550587				13	e	320	e	
128	Hexachlorocyclohexane (HCH)-Technical	608731			Y	0.027	el	0.032	el	
129	Methoxychlor	72435				0.0054	e	0.0055	e	
130	Pentachlorobenzene	608935				0.035	e	0.036	e	

Table Footnotes

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

b. See definitions of Acute Criteria (CMC) and Chronic Criteria (CCC), Section 010 of these rules.

A		B Aquatic life		C Human health for consumption of:		
(Number) Compound	^a -CAS-Number	^b -CMC (µg/L) B1	^b -CCC (µg/L) B2	Carcinogen?	Water & fish (µg/L) C1	Fish only (µg/L) C2
<p>e. 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:</p> $\text{AWQC} = \frac{\text{RfD} * \text{RSC} * \left(\frac{\text{BW}}{\text{DI} + (\text{FI} * \text{BAF})} \right)}{1}$ <p>and criteria for carcinogens are calculated using the formula:</p> $\text{AWQC} = \frac{\text{RSD} * \left(\frac{\text{BW}}{\text{DI} + (\text{FI} * \text{BAF})} \right)}{1}$ <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 RSD = $\frac{\text{Target Incremental Cancer Risk}}{\text{Cancer Potency Factor}}$ (mg/kg-day), chemical specific value, see TSD RSC = Relative Source Contribution, chemical specific value, see TSD</p>						
d. Inorganic forms only.						
e. Criteria for these metals are expressed as a function of the water effect ratio, WER, as defined in Subsection 210.03.c.iii. CMC = column B1 value X WER. CCC = column B2 value X WER.						
f. Criterion expressed as total recoverable (unfiltered) concentrations.						
g. No aquatic life criterion is adopted for inorganic mercury. However, the narrative criteria for toxics in Section 200 of these rules applies. The Department believes application of the human health criterion for methylmercury will be protective of aquatic life in most situations.						
h. 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.						

A		B Aquatic life		C Human health for consumption of:		
(Number) Compound	^a -CAS Number	^b -CMC (µg/L)	^b -CCC (µg/L)	Carcinogen?	Water & fish (µg/L)	Fish only (µg/L)
		B1	B2		C1	C2
i. Aquatic life criteria for these metals are a function of total hardness (mg/L as calcium carbonate), the pollutant's water effect ratio (WER) as defined in Subsection 210.03.c.iii. and multiplied by an appropriate dissolved conversion factor as defined in Subsection 210.02. For comparative purposes only, the example values displayed in this table are shown as dissolved metal and correspond to a total hardness of one hundred (100) mg/L and a water effect ratio of one (1.0).						
j. Criteria are expressed as weak acid dissociable (WAD) cyanide.						
k. Total chlorine residual concentrations.						
l. EPA guidance allows states to choose from a range of 10 ⁻⁴ to 10 ⁻⁶ for the incremental increase in cancer risk used in human health criteria calculation. Idaho has chosen to base this criterion on carcinogenicity of 10 ⁻⁵ risk.						
m. Aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows. Values displayed above in the table correspond to a pH of seven and eight tenths (7.8). CMC = exp(1.005(pH) - 4.830) CCC = exp(1.005(pH) - 5.290)						
n. 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.						
o. This criterion applies to total PCBs, (e.g. the sum of all congener, isomer, or Aroclor analyses).						
p. 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: TRC = [BW x (RfD - (RSC x RfD))] / Σ TL. 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.						
q. This criterion is based on the drinking water Maximum Contaminant Level (MCL).						

(3-25-16)

02. Factors for Calculating Hardness Dependent Metals Criteria. Hardness dependent metals criteria are calculated using values from the following table in the equations: (5-3-03)

a. $CMC = WER \exp\{m_A[\ln(\text{hardness})] + b_A\} \times \text{Acute Conversion Factor}$ (5-3-03)

b. $CCC = WER \exp\{m_C[\ln(\text{hardness})] + b_C\} \times \text{Chronic Conversion Factor}$

01. Criteria for Toxic Substances. The criteria of Section 210 apply to surface waters of the state as provided in Tables 1 and 2. ()

a. Table 1 contains criteria set for protection of aquatic life. Criteria for metals (arsenic through zinc) are expressed as dissolved fraction unless otherwise noted. For purposes of these criteria, dissolved fraction means that which passes through a forty-five hundredths (0.45) micron filter. ()

Table 1. Criteria for Protection of Aquatic Life					
Compound	^a CAS Number	^b CMC (µg/L)		^b CCC (µg/L)	
Inorganic Compounds/Metals					
Arsenic	7440382	340	c	150	c
Cadmium	7440439	1.3	f	0.6	f
Chromium III	16065831	570	f	74	f
Chromium VI	18540299	16	c	11	c
Copper	7440508	17	f	11	f
Lead	7439921	65	f	2.5	f
Mercury	7439976		e		e
<p>Note: In 2005, Idaho adopted EPA's recommended methylmercury fish tissue criterion for protection of human health (docket 58-0102-0302). The decision was made to remove the old tissue-based aquatic life criteria and rely on the fish tissue criterion to provide protection for aquatic life as well as human health. Thus, current Idaho water quality standards do not have mercury water column criteria for the protection of aquatic life. While EPA approved Idaho's adoption of the fish tissue criterion in September 2005, it had withheld judgment on Idaho's removal of aquatic life criteria. On December 12, 2008, EPA disapproved Idaho's removal of the old aquatic life criteria. The water column criteria for total recoverable mercury published in 2004 Idaho Administrative Code continue to apply and are effective for CWA purposes. For more information go to http://www.deq.idaho.gov/epa-actions-on-proposed-standards.</p>					
Nickel	7440020	470	f	52	f
Selenium	7782492	20	d	5	d
Silver	7440224	3.4	f		
Zinc	7440666	120	f	120	f
Inorganic Compounds/Non-Metals					
Chlorine		19	h	11	h
Cyanide	57125	22	g	5.2	g
Organic Compounds					
Aldrin	39002	3			
gamma-BHC (Lindane)	58899	2		0.08	
Chlordane	57749	2.4		0.0043	
4,4'-DDT	50293	1.1		0.001	
Dieldrin	60571	2.5		0.0019	
alpha-Endosulfan	959988	0.22		0.056	
beta-Endosulfan	33213659	0.22		0.056	

Table 1. Criteria for Protection of Aquatic Life					
Compound	^a CAS Number	^b CMC (µg/L)		^b CCC (µg/L)	
<u>Endrin</u>	<u>72208</u>	<u>0.18</u>		<u>0.0023</u>	
<u>Heptachlor</u>	<u>76448</u>	<u>0.52</u>		<u>0.0038</u>	
<u>Heptachlor Epoxide</u>	<u>1024573</u>	<u>0.52</u>		<u>0.0038</u>	
<u>Pentachlorophenol</u>	<u>87865</u>	<u>20</u>	<u>i</u>	<u>13</u>	<u>i</u>
<u>Polychlorinated Biphenyls PCBs</u>	<u>j</u>			<u>0.014</u>	<u>j</u>
<u>Toxaphene</u>	<u>8001352</u>	<u>0.73</u>		<u>0.0002</u>	
Footnotes for Table 1. Criteria for Protection of Aquatic Life					
a. <u>Chemical Abstracts Service (CAS) registry numbers which provide a unique identification for each chemical.</u>					
b. <u>See definitions of Acute Criteria (CMC) and Chronic Criteria (CCC), Section 010 of these rules.</u>					
c. <u>Criterion or these metals are expressed as a function of the water effect ratio, WER, as defined in Subsection 210.03.c.iii. CMC = CMC column value X WER. CCC = CCC column value X WER.</u>					
d. <u>Criterion expressed as total recoverable (unfiltered) concentrations.</u>					
e. <u>No aquatic life criterion is adopted for inorganic mercury. However, the narrative criteria for toxics in Section 200 of these rules applies. The Department believes application of the human health criterion for methylmercury will be protective of aquatic life in most situations.</u>					
f. <u>Aquatic life criteria for these metals are a function of total hardness (mg/L as calcium carbonate), the pollutant's water effect ratio (WER) as defined in Subsection 210.03.c.iii. and multiplied by an appropriate dissolved conversion factor as defined in Subsection 210.02. For comparative purposes only, the example values displayed in this table are shown as dissolved metal and correspond to a total hardness of one hundred (100) mg/L and a water effect ratio of one (1.0).</u>					
g. <u>Criteria are expressed as weak acid dissociable (WAD) cyanide.</u>					
h. <u>Total chlorine residual concentrations.</u>					
i. <u>Aquatic life criteria for pentachlorophenol are expressed as a function of pH, and are calculated as follows. Values displayed above in the table correspond to a pH of seven and eight tenths (7.8). CMC = exp(1.005(pH)-4.830) CCC = exp(1.005(pH)-5.290)</u>					
j. <u>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.</u>					

()

b. Table 2 contains criteria set for 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. ()

Table 2. Criteria for Protection of Human Health (based on consumption of:)						
Compound	^a CAS Number	Carcinogen?	Water & Fish (µg/L)		Fish Only (µg/L)	
<u>Inorganic Compounds/Metals</u>						
<u>Antimony</u>	<u>7440360</u>		<u>5.2</u>	<u>b</u>	<u>190</u>	<u>b</u>
<u>Arsenic</u>	<u>7440382</u>	<u>Y</u>	<u>10</u>	<u>cdj</u>	<u>10</u>	<u>cdj</u>
<p><u>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 2016, 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. Until new criteria are adopted, EPA will use criteria of 6.2 µg/L for exposure through fish consumption only and 0.02 µg/L for exposure through both drinking water + consumption of fish in its NPDES permitting actions. These criteria are published in 1996 Idaho Administrative Code (Subsections 250.01.c, 250.02.a.iv, 250.03.a.i). For more information, go to http://www.deq.idaho.gov/epa-actions-on-proposed-standards.</u></p>						
<u>Beryllium</u>	<u>7440417</u>			<u>e</u>		<u>e</u>
<u>Cadmium</u>	<u>7440439</u>			<u>e</u>		<u>e</u>
<u>Chromium III</u>	<u>16065831</u>			<u>e</u>		<u>e</u>
<u>Chromium VI</u>	<u>18540299</u>			<u>e</u>		<u>e</u>
<u>Copper</u>	<u>7440508</u>		<u>1300</u>	<u>j</u>		
<u>Lead</u>	<u>7439921</u>			<u>e</u>		<u>e</u>
<u>Methylmercury</u>	<u>22967926</u>				<u>0.3mg/kg</u>	<u>i</u>
<u>Nickel</u>	<u>7440020</u>		<u>58</u>	<u>b</u>	<u>100</u>	<u>b</u>
<u>Selenium</u>	<u>7782492</u>		<u>29</u>	<u>b</u>	<u>250</u>	<u>b</u>
<u>Thallium</u>	<u>7440280</u>		<u>0.017</u>	<u>b</u>	<u>0.023</u>	<u>b</u>
<u>Zinc</u>	<u>7440666</u>		<u>870</u>	<u>b</u>	<u>1,500</u>	<u>b</u>
<u>Inorganic Compounds/Non-Metals</u>						
<u>Cyanide</u>	<u>57125</u>		<u>3.9</u>	<u>b</u>	<u>140</u>	<u>b</u>
<u>Asbestos</u>	<u>1332214</u>		<u>7,000,000 Fibers/L</u>	<u>j</u>		
<u>Organic Compounds</u>						
<u>Acenaphthene</u>	<u>83329</u>		<u>26</u>	<u>b</u>	<u>28</u>	<u>b</u>
<u>Acenaphthylene</u>	<u>208968</u>			<u>e</u>		<u>e</u>
<u>Acrolein</u>	<u>107028</u>		<u>3.2</u>	<u>b</u>	<u>120</u>	<u>b</u>
<u>Acrylonitrile</u>	<u>107131</u>	<u>Y</u>	<u>0.60</u>	<u>bf</u>	<u>22</u>	<u>bf</u>
<u>Aldrin</u>	<u>309002</u>	<u>Y</u>	<u>2.5E-06</u>	<u>bf</u>	<u>2.5E-06</u>	<u>bf</u>

Table 2. Criteria for Protection of Human Health (based on consumption of:)						
Compound	^a CAS Number	Carcinogen?	Water & Fish (µg/L)		Fish Only (µg/L)	
<u>Anthracene</u>	<u>120127</u>		<u>110</u>	<u>b</u>	<u>120</u>	<u>b</u>
<u>alpha-BHC</u>	<u>319846</u>	<u>Y</u>	<u>0.0012</u>	<u>bf</u>	<u>0.0013</u>	<u>bf</u>
<u>beta-BHC</u>	<u>319857</u>	<u>Y</u>	<u>0.036</u>	<u>bf</u>	<u>0.045</u>	<u>bf</u>
<u>gamma-BHC (Lindane)</u>	<u>58899</u>		<u>1.4</u>	<u>b</u>	<u>1.4</u>	<u>b</u>
<u>delta-BHC</u>	<u>319868</u>			<u>e</u>		<u>e</u>
<u>Benzene</u>	<u>71432</u>		<u>3.0</u>	<u>bf</u>	<u>28</u>	<u>b</u>
<u>Benzidine</u>	<u>92875</u>	<u>Y</u>	<u>0.0014</u>	<u>bf</u>	<u>0.033</u>	<u>bf</u>
<u>Benzo(a)Anthracene</u>	<u>56553</u>	<u>Y</u>	<u>0.0042</u>	<u>bf</u>	<u>0.0042</u>	<u>bf</u>
<u>Benzo(b)Fluoranthene</u>	<u>205992</u>	<u>Y</u>	<u>0.0042</u>	<u>bf</u>	<u>0.0042</u>	<u>bf</u>
<u>Benzo(k)Fluoranthene</u>	<u>207089</u>	<u>Y</u>	<u>0.042</u>	<u>bf</u>	<u>0.042</u>	<u>bf</u>
<u>Benzo(ghi)Perylene</u>	<u>191242</u>			<u>e</u>		<u>e</u>
<u>Benzo(a)Pyrene</u>	<u>50328</u>	<u>Y</u>	<u>0.00042</u>	<u>bf</u>	<u>0.00042</u>	<u>bf</u>
<u>Bis(2-Chloroethoxy) Methane</u>	<u>111911</u>			<u>e</u>		<u>e</u>
<u>Bis(2-Chloroethyl) Ether</u>	<u>111444</u>	<u>Y</u>	<u>0.29</u>	<u>bf</u>	<u>6.8</u>	<u>bf</u>
<u>Bis(2-Chloroisopropyl) Ether</u>	<u>108601</u>		<u>220</u>	<u>b</u>	<u>1,200</u>	<u>b</u>
<u>Bis(Chloromethyl) Ether</u>	<u>542881</u>	<u>Y</u>	<u>0.0015</u>	<u>bf</u>	<u>0.055</u>	<u>bf</u>
<u>Bis(2-Ethylhexyl) Phthalate</u>	<u>117817</u>	<u>Y</u>	<u>1.2</u>	<u>bf</u>	<u>1.2</u>	<u>bf</u>
<u>Bromoform</u>	<u>75252</u>	<u>Y</u>	<u>62</u>	<u>bf</u>	<u>380</u>	<u>bf</u>
<u>4-Bromophenyl Phenyl Ether</u>	<u>101553</u>			<u>e</u>		<u>e</u>
<u>Butylbenzyl Phthalate</u>	<u>85687</u>		<u>0.33</u>	<u>b</u>	<u>0.33</u>	<u>b</u>
<u>Carbon Tetrachloride</u>	<u>56235</u>	<u>Y</u>	<u>3.6</u>	<u>bf</u>	<u>15</u>	<u>bf</u>
<u>Chlorobenzene</u>	<u>108907</u>		<u>89</u>	<u>b</u>	<u>270</u>	<u>b</u>
<u>Chlordane</u>	<u>57749</u>	<u>Y</u>	<u>0.0010</u>	<u>bf</u>	<u>0.0010</u>	<u>bf</u>
<u>Chlorodibromomethane</u>	<u>124481</u>	<u>Y</u>	<u>7.4</u>	<u>bf</u>	<u>67</u>	<u>bf</u>
<u>Chloroethane</u>	<u>75003</u>			<u>e</u>		<u>e</u>
<u>2-Chloroethylvinyl Ether</u>	<u>110758</u>			<u>e</u>		<u>e</u>
<u>Chloroform</u>	<u>67663</u>		<u>61</u>	<u>b</u>	<u>730</u>	<u>b</u>
<u>2-Chloronaphthalene</u>	<u>91587</u>		<u>330</u>	<u>b</u>	<u>380</u>	<u>b</u>
<u>2-Chlorophenol</u>	<u>95578</u>		<u>30</u>	<u>b</u>	<u>260</u>	<u>b</u>

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

Compound	^a CAS Number	Carcinogen?	Water & Fish (µg/L)		Fish Only (µg/L)	
<u>Chlorophenoxy Herbicide (2,4-D)</u>	<u>94757</u>		<u>1,000</u>	<u>b</u>	<u>3,900</u>	<u>b</u>
<u>Chlorophenoxy Herbicide (2,4,5-TP) [Silvex]</u>	<u>93721</u>		<u>82</u>	<u>b</u>	<u>130</u>	<u>b</u>
<u>4-Chlorophenyl Phenyl Ether</u>	<u>7005723</u>			<u>e</u>		<u>e</u>
<u>Chrysene</u>	<u>218019</u>	<u>Y</u>	<u>0.42</u>	<u>bf</u>	<u>0.42</u>	<u>bf</u>
<u>4,4'-DDD</u>	<u>72548</u>	<u>Y</u>	<u>0.00042</u>	<u>bf</u>	<u>0.00042</u>	<u>bf</u>
<u>4,4'-DDE</u>	<u>72559</u>	<u>Y</u>	<u>5.5E-05</u>	<u>bf</u>	<u>5.5E-05</u>	<u>bf</u>
<u>4,4'-DDT</u>	<u>50293</u>	<u>Y</u>	<u>9.8E-05</u>	<u>bf</u>	<u>9.8E-05</u>	<u>bf</u>
<u>Di-n-Butyl Phthalate</u>	<u>84742</u>		<u>8.2</u>	<u>b</u>	<u>8.3</u>	<u>b</u>
<u>Di-n-Octyl Phthalate</u>	<u>117840</u>			<u>e</u>		<u>e</u>
<u>Dibenzo (a,h) Anthracene</u>	<u>53703</u>	<u>Y</u>	<u>0.00042</u>	<u>bf</u>	<u>0.00042</u>	<u>bf</u>
<u>1,2-Dichlorobenzene</u>	<u>95501</u>		<u>700</u>	<u>b</u>	<u>1,100</u>	<u>b</u>
<u>1,3-Dichlorobenzene</u>	<u>541731</u>		<u>3.5</u>	<u>b</u>	<u>4.8</u>	<u>b</u>
<u>1,4-Dichlorobenzene</u>	<u>106467</u>		<u>180</u>	<u>b</u>	<u>300</u>	<u>b</u>
<u>3,3'-Dichlorobenzidine</u>	<u>91941</u>	<u>Y</u>	<u>0.29</u>	<u>bf</u>	<u>0.48</u>	<u>bf</u>
<u>Dichlorobromomethane</u>	<u>75274</u>	<u>Y</u>	<u>8.8</u>	<u>bf</u>	<u>86</u>	<u>bf</u>
<u>1,1-Dichloroethane</u>	<u>75343</u>			<u>e</u>		<u>e</u>
<u>1,2-Dichloroethane</u>	<u>107062</u>	<u>Y</u>	<u>96</u>	<u>bf</u>	<u>2,000</u>	<u>bf</u>
<u>1,1-Dichloroethylene</u>	<u>75354</u>		<u>310</u>	<u>b</u>	<u>5,200</u>	<u>b</u>
<u>2,4-Dichlorophenol</u>	<u>120832</u>		<u>9.6</u>	<u>b</u>	<u>19</u>	<u>b</u>
<u>1,2-Dichloropropane</u>	<u>78875</u>	<u>Y</u>	<u>8.5</u>	<u>bf</u>	<u>98</u>	<u>bf</u>
<u>1,3-Dichloropropene</u>	<u>542756</u>	<u>Y</u>	<u>2.5</u>	<u>bf</u>	<u>38</u>	<u>bf</u>
<u>Dieldrin</u>	<u>60571</u>	<u>Y</u>	<u>4.2E-06</u>	<u>bf</u>	<u>4.2E-06</u>	<u>bf</u>
<u>Diethyl Phthalate</u>	<u>84662</u>		<u>200</u>	<u>b</u>	<u>210</u>	<u>b</u>
<u>2,4-Dimethylphenol</u>	<u>105679</u>		<u>110</u>	<u>b</u>	<u>820</u>	<u>b</u>
<u>Dimethyl Phthalate</u>	<u>131113</u>		<u>600</u>	<u>b</u>	<u>600</u>	<u>b</u>
<u>Dinitrophenols</u>	<u>25550587</u>		<u>13</u>	<u>b</u>	<u>320</u>	<u>b</u>
<u>2,4-Dinitrophenol</u>	<u>51285</u>		<u>12</u>	<u>b</u>	<u>110</u>	<u>b</u>
<u>2,4-Dinitrotoluene</u>	<u>121142</u>	<u>Y</u>	<u>0.46</u>	<u>bf</u>	<u>5.5</u>	<u>bf</u>
<u>2,6-Dinitrotoluene</u>	<u>606202</u>			<u>e</u>		<u>e</u>
<u>1,2-Diphenylhydrazine</u>	<u>122667</u>	<u>Y</u>	<u>0.25</u>	<u>bf</u>	<u>0.65</u>	<u>bf</u>

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

Compound	^a CAS Number	Carcinogen?	Water & Fish (µg/L)		Fish Only (µg/L)	
2, 3, 7, 8-TCDD Dioxin	1746016	Y	1.8E-08	bf	1.9E-08	bf
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 (µg/L)		Fish Only (µg/L)	
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)	Fish Only (µg/L)
<p>$AWQC = RfD * RSC * \left(\frac{BW}{DI + (FI * BAF)} \right)$</p> <p>and criteria for carcinogens are calculated using the formula:</p> <p>$AWQC = RSD * \left(\frac{BW}{DI + (FI * BAF)} \right)$</p> <p>Where: AWQC = Ambient water quality criterion (mg/L)</p> <p>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</p> <p>BAF = Bioaccumulation Factor, L/kg, chemical specific value, see TSD RfD = Reference dose (mg/kg-day), chemical specific value, see TSD</p> <p>$RSD = \frac{\text{Target Incremental Cancer Risk}}{\text{Cancer Potency Factor}}$ (mg/kg-day), chemical specific value, see TSD</p> <p>RSC = Relative Source Contribution, chemical specific value, see TSD</p>				
<p>c. Inorganic forms only.</p>				
<p>d. Criterion expressed as total recoverable (unfiltered) concentrations.</p>				
<p>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.</p>				
<p>f. EPA guidance allows states to choose from a range of 10⁻⁴ to 10⁻⁶ for the incremental increase in cancer risk used in human health criteria calculation. Idaho has chosen to base this criterion on carcinogenicity of 10⁻⁵ risk.</p>				
<p>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.</p>				
<p>h. This criterion applies to total PCBs. (e.g. the sum of all congener, isomer, or Aroclor analyses).</p>				
<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: $TRC = [BW \times \{RfD - (RSC \times RfD)\}] / \sum TL$. 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 Containment Level (MCL).</p>				

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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. (3-25-16)

a. For all waters for which the Department has determined mixing zones to be applicable, the toxic substance criteria apply at the boundary of the mixing zone(s) and beyond. Absent an authorized mixing zone, the toxic substance criteria apply throughout the waterbody including at the end of any discharge pipe, canal or other discharge point. (3-25-16)

b. Low flow design conditions. Water quality-based effluent limits and mixing zones for toxic substances shall be based on the following low flows in perennial receiving streams. Numeric chemical criteria may be exceeded in perennial streams outside any applicable mixing zone only when flows are less than these values:

Aquatic Life		Human Health	
CMC ("acute" criteria)	1Q10 or 1B3	Non-carcinogens	Harmonic mean flow
CCC ("chronic" criteria)	7Q10 or 4B3	Carcinogens	Harmonic mean flow

(3-25-16)

i. Where "1Q10" is the lowest one-day flow with an average recurrence frequency of once in ten (10) years determined hydrologically; (5-3-03)

ii. Where "1B3" is biologically based and indicates an allowable exceedance of once every three (3) years. It may be determined by EPA's computerized method (DFLOW model); (5-3-03)

iii. Where "7Q10" is the lowest average seven (7) consecutive day low flow with an average recurrence frequency of once in ten (10) years determined hydrologically; (5-3-03)

iv. Where "4B3" is biologically based and indicates an allowable exceedance for four (4) consecutive days once every three (3) years. It may be determined by EPA's computerized method (DFLOW model); (5-3-03)

v. Where the harmonic mean flow is a long term mean flow value calculated by dividing the number of daily flows analyzed by the sum of the reciprocals of those daily flows. (5-3-03)

c. Application of aquatic life metals criteria. (3-25-16)

i. For metals other than cadmium, for purposes of calculating hardness dependent aquatic life criteria from the equations in Subsection 210.02, the minimum hardness allowed for use in those equations shall not be less than twenty-five (25) mg/l, as calcium carbonate, even if the actual ambient hardness is less than twenty-five (25) mg/l as calcium carbonate. For cadmium, the minimum hardness for use in those equations shall not be less than ten (10) mg/l, as calcium carbonate. The maximum hardness allowed for use in those equations shall not be greater than four hundred (400) mg/l, as calcium carbonate, except as specified in Subsections 210.03.c.ii. and 210.03.c.iii., even if the actual ambient hardness is greater than four hundred (400) mg/l as calcium carbonate. (3-29-10)

ii. The hardness values used for calculating aquatic life criteria for metals at design discharge conditions shall be representative of the ambient hardnesses for a receiving water that occur at the design discharge conditions given in Subsection 210.03.b. (5-3-03)

iii. Except as otherwise noted, the aquatic life criteria for metals (~~compounds #1 through #13~~ [arsenic through zinc](#) in ~~the criteria #Table 1 of in~~ Subsection 210.02~~1~~) are expressed as dissolved metal concentrations. Unless otherwise specified by the Department, dissolved concentrations are considered to be concentrations recovered from a sample which has passed through a forty-five hundredths (0.45) micron filter. For the purposes of calculating aquatic life criteria for metals from the equations in footnotes ~~ec.~~ and ~~ff.~~ in ~~the criteria #Table 1 in~~

Subsection 210.01, the water effect ratio is computed as a specific pollutant's acute or chronic toxicity values measured in water from the site covered by the standard, divided by the respective acute or chronic toxicity value in laboratory dilution water. The water-effect ratio shall be assigned a value of one (1.0), except where the Department assigns a different value that protects the designated uses of the water body from the toxic effects of the pollutant, and is derived from suitable tests on sampled water representative of conditions in the affected water body, consistent with the design discharge conditions established in Subsection 210.03.b. For purposes of calculating water effects ratios, the term acute toxicity value is the toxicity test results, such as the concentration lethal one-half (1/2) of the test organisms (i.e., LC50) after ninety-six (96) hours of exposure (e.g., fish toxicity tests) or the effect concentration to one-half of the test organisms, (i.e., EC50) after forty-eight (48) hours of exposure (e.g., daphnia toxicity tests). For purposes of calculating water effects ratios, the term chronic value is the result from appropriate hypothesis testing or regression analysis of measurements of growth, reproduction, or survival from life cycle, partial life cycle, or early life stage tests. The determination of acute and chronic values shall be according to current standard protocols (e.g., those published by the American Society for Testing and Materials (ASTM)) or other comparable methods. For calculation of criteria using site-specific values for both the hardness and the water effect ratio, the hardness used in the equations in Subsection 210.02 shall be as required in Subsection 210.03.c.ii. Water hardness shall be calculated from the measured calcium and magnesium ions present, and the ratio of calcium to magnesium shall be approximately the same in laboratory toxicity testing water as in the site water, or be similar to average ratios of laboratory waters used to derive the criteria. (4-6-05)()

iv. Implementation Guidance for the Idaho Mercury Water Quality Criteria. (4-6-05)

(1) The "Implementation Guidance for the Idaho Mercury Water Quality Criteria" describes in detail suggested methods for discharge related monitoring requirements, calculation of reasonable potential to exceed (RPTE) water quality criteria in determining need for mercury effluent limits, and use of fish tissue mercury data in calculating mercury load reductions. This guidance, or its updates, will provide assistance to the Department and the public when implementing the methylmercury criterion. The "Implementation Guidance for the Idaho Mercury Water Quality Criteria" also provides basic background information on mercury in the environment, the novelty of a fish tissue criterion for water quality, the connection between human health and aquatic life protection, and the relation of environmental programs outside of Clean Water Act programs to reducing mercury contamination of the environment. The "Implementation Guidance for the Idaho Mercury Water Quality Criteria" is available at the Department of Environmental Quality, 1410 N. Hilton, Boise, Idaho 83706, and on the DEQ website at http://www.deq.idaho.gov/media/639808-idaho_mercury_wq_guidance.pdf. (4-6-05)

(2) The implementation of a fish tissue criterion in NPDES permits and TMDLs requires a non-traditional approach, as the basic criterion is not a concentration in water. In applying the methylmercury fish tissue criterion in the context of NPDES effluent limits and TMDL load reductions, the Department will assume change in fish tissue concentrations of methylmercury are proportional to change in water body loading of total mercury. Reasonable potential to exceed (RPTE) the fish tissue criterion for existing NPDES sources will be based on measured fish tissue concentrations potentially affected by the discharge exceeding a specified threshold value, based on uncertainty due to measurement variability. This threshold value is also used for TMDL decisions. Because measured fish tissue concentrations do not reflect the effect of proposed new or increased discharge of mercury, RPTE in these cases will be based upon an estimated fish tissue methylmercury concentration, using projected changes in waterbody loading of total mercury and a proportional response in fish tissue mercury. For the above purposes, mercury will be measured in the skinless filets of sport fish using techniques capable of detecting tissue concentrations down to point zero five (0.05) mg/kg. Total mercury analysis may be used, but will be assumed to be all methylmercury for purposes of implementing the criterion. (4-6-05)

d. Application of toxics criteria. (3-25-16)

i. Frequency and duration for aquatic life toxics criteria. ~~Column B1~~ CMC column criteria in Table 1 in Subsection 210.01 are concentrations not to be exceeded for a one-hour average more than once in three (3) years. ~~Column B2~~ CCC column criteria in Table 1 in Subsection 210.01 are concentrations not to be exceeded for a four-day average more than once in three (3) years. (3-25-16)()

ii. Frequency and duration for human health toxics criteria. ~~Columns C1 and C2~~ Criteria in Table 2 in Subsection 210.01 are not to be exceeded based on an annual harmonic mean. (3-25-16)()

04. National Pollutant Discharge Elimination System Permitting. For the purposes of NPDES permitting, interpretation and implementation of metals criteria listed in Subsection 210.02 should be governed by the following standards, that are hereby incorporated by reference, in addition to other scientifically defensible methods deemed appropriate by the Department; provided, however, any identified conversion factors within these documents are not incorporated by reference. Metals criteria conversion factors are identified in Subsection 210.02 of this rule. (5-3-03)

a. “Guidance Document on Dissolved Criteria -- Expression of Aquatic Life Criteria,” EPA, October 1993, <http://www.deq.idaho.gov/media/827413-epa-guidance-dissolved-criteria-1093.pdf>. (4-5-00)

b. “Guidance Document on Dynamic Modeling and Translators,” EPA, August 1993, <http://www.deq.idaho.gov/media/827417-epa-guidance-dynamic-modeling-translators-0893.pdf>. (4-5-00)

c. “Guidance Document on Clean Analytical Techniques and Monitoring,” EPA, October 1993, <http://www.deq.idaho.gov/media/827421-epa-guidance-analytical-techniques-1093.pdf>. (4-5-00)

d. “Interim Guidance on Determination and Use of Water-Effect Ratios for Metals,” EPA, February 1994, <http://www.deq.idaho.gov/media/827409-epa-guidance-water-effect-ratios-for-metals-0294.pdf>. (4-5-00)

e. “Technical Support Document for Water Quality-Based Toxics Control.” EPA, March 1991. <http://www.deq.idaho.gov/media/60177101/58-0102-1201-epa-technical-support-document-1991.pdf>. (3-25-16)

05. Development of Toxic Substance Criteria. (4-5-00)

a. Aquatic Life Communities Criteria. Numeric criteria for the protection of aquatic life uses not identified in these rules for toxic substances, may be derived by the Department from the following information: (4-5-00)

i. Site-specific criteria developed pursuant to Section 275; (4-5-00)

ii. Effluent biomonitoring, toxicity testing and whole-effluent toxicity determinations; (4-5-00)

iii. The most recent recommended criteria defined in EPA's ECOTOX database. When using EPA recommended criteria to derive water quality criteria to protect aquatic life uses, the lowest observed effect concentrations (LOECs) shall be considered; or (3-25-16)

iv. Scientific studies including, but not limited to, instream benthic assessment or rapid bioassessment. (4-5-00)

b. Human Health Criteria. (4-5-00)

Note: In 2016, Idaho updated human health criteria for 104 toxic substances (10 of which are new). Final rule submitted to EPA on December 13, 2016 (docket 58-0102-1201). Until EPA approves the revisions in this rule docket, the human health criteria published in [2005 Idaho Administrative Code](#) in Section 210 continue to apply and are effective for CWA purposes. These criteria are listed in [Numeric Criteria for Toxic Substances \(2005\)](#). The previous human health criteria based on a fish consumption rate of 6.5 g/day published in [2005 Idaho Administrative Code](#) in Section 210.05.b.i. continue to apply and are effective for CWA purposes. Until EPA approves the revisions in this rule docket, the additional fish-plus-water criterion for copper; the revisions in Sections 070.08, 210.03, 210.04, 210.05.b.ii. and 400.06; and the definition of harmonic mean published in [2015 Idaho Administrative Code](#) continue to apply and are effective for CWA purposes. For more information, go to <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>.

i. When numeric criteria for the protection of human health are not identified in these rules for toxic substances, quantifiable criteria may be derived by the Department using best available science on toxicity thresholds

(i.e. reference dose or cancer slope factor), such as defined in EPA's Integrated Risk Information System (IRIS) or other peer-reviewed source acceptable to the Department. (3-25-16)

ii. When using toxicity thresholds to derive water quality criteria to protect human health, a fish consumption rate representative of the population to be protected, a mean adult body weight, an adult 90th percentile water ingestion rate, a trophic level weighted BAF or BCF, and a hazard quotient of one (1) for non-carcinogens or a cancer risk level of 10^{-5} for carcinogens shall be utilized. (3-25-16)

(BREAK IN CONTINUITY OF SECTIONS)

401. POINT SOURCE WASTEWATER TREATMENT REQUIREMENTS.

Unless more stringent limitations are necessary to meet the applicable requirements of Sections 200 through 300, or unless specific exemptions are made pursuant to Subsection 080.02, wastewaters discharged into surface waters of the state must have the following characteristics: (4-11-06)

- 01. Temperature.** The wastewater must not affect the receiving water outside the mixing zone so that: (7-1-93)
- a.** The temperature of the receiving water or of downstream waters will interfere with designated beneficial uses. (7-1-93)
 - b.** Daily and seasonal temperature cycles characteristic of the water body are not maintained. (7-1-93)
 - c.** If temperature criteria for the designated aquatic life use are exceeded in the receiving waters upstream of the discharge due to natural background conditions, then wastewater must not raise the receiving water temperatures by more than three tenths (0.3) degrees C. (3-29-12)

Note: Submitted to EPA as a temporary rule on July 20, 2011, and as a final rule on August 7, 2012 (docket 58-0102-1101). This revision removed the numeric limits on point source induced changes in receiving water temperature. Until EPA approves this revision, the previous treatment requirements published in [2011 Idaho Administrative Code](#) continue to apply and are effective for CWA purposes. For more information, go to <http://www.deq.idaho.gov/epa-actions-on-proposed-standards>.

- 02. Turbidity.** The wastewater must not increase the turbidity of the receiving water outside the mixing zone by: (7-1-93)
- a.** More than five (5) NTU (Nephelometric Turbidity Units) over background turbidity, when background turbidity is fifty (50) NTU or less; or (7-1-93)
 - b.** More than ten percent (10%) increase in turbidity when background turbidity is more than fifty (50) NTU, not to exceed a maximum increase of twenty-five (25) NTU. (7-1-93)

~~**03. Total Chlorine Residual.** The wastewater must not affect the receiving water outside the mixing zone so that its total chlorine residual concentration exceeds eleven one thousandths (0.011) mg/l. (1-1-89)~~