

**Negotiated Rule Draft No. 2**

**Docket No. 58-0102-1101, Dated June 17, 2011**

**Yellow shaded text indicates revisions made based on discussion held on May 25, 2011 and review of written comments received.**

**250. SURFACE WATER QUALITY CRITERIA FOR AQUATIC LIFE USE DESIGNATIONS.**

**01. General Criteria.** The following criteria apply to all aquatic life use designations. Surface waters are not to vary from the following characteristics due to human activities: (3-15-02)

**a.** Hydrogen Ion Concentration (pH) values within the range of six point five (6.5) to nine point zero (9.0); (3-30-01)

**b.** The total concentration of dissolved gas not exceeding one hundred and ten percent (110%) of saturation at atmospheric pressure at the point of sample collection; (7-1-93)

**02. Cold Water.** Waters designated for cold water aquatic life are not to vary from the following characteristics due to human activities: (3-15-02)

**a.** Dissolved Oxygen Concentrations exceeding six (6) mg/l at all times. In lakes and reservoirs this standard does not apply to: (7-1-93)

**i.** The bottom twenty percent (20%) of water depth in natural lakes and reservoirs where depths are thirty-five (35) meters or less. (7-1-93)

**ii.** The bottom seven (7) meters of water depth in natural lakes and reservoirs where depths are greater than thirty-five (35) meters. (7-1-93)

**iii.** Those waters of the hypolimnion in stratified lakes and reservoirs. (7-1-93)

**b.** Water temperatures of twenty-two (22) degrees C or less with a maximum daily average of no greater than nineteen (19) degrees C. (8-24-94)

**c.** Temperature in lakes shall have no measurable change from natural background conditions. Reservoirs with mean detention times of greater than fifteen (15) days are considered lakes for this purpose. (3-15-02)

**d.** Ammonia. The following criteria are not to be exceeded dependent upon the temperature, T (degrees C), and pH of the water body: (3-15-02)

**i.** Acute Criterion (Criterion Maximum Concentration (CMC)). The one (1) hour average concentration of total ammonia nitrogen (in mg N/L) is not to exceed, more than once every three (3) years, the value calculated using the following equation:

$$CMC = \frac{0.275}{1 + 10^{1.284 - pH}} + \frac{39.0}{1 + 10^{pH - 1.284}}$$

(3-15-02)

**ii.** Chronic Criterion (Criterion Continuous Concentration (CCC)). (3-15-02)

**(1)** The thirty (30) day average concentration of total ammonia nitrogen (in mg N/L) is not to exceed, more than once every three (3) years, the value calculated using the following equations: (3-15-02)

(a) When fish early life stages are likely present:  

$$CCC - \left( \frac{0.0577}{1+10^{-(2.85-1.45 \cdot 10^{0.0028(25-T)})}} + \frac{2.487}{1+10^{-(2.85-1.45 \cdot 10^{0.0028(25-T)})}} \right) \cdot 1.45 \cdot 10^{0.0028(25-T)}$$
(3-15-02)

(b) When fish early life stages are likely absent:  

$$CCC - \left( \frac{0.0577}{1+10^{-(2.85-1.45 \cdot 10^{0.0028(25-T)})}} + \frac{2.487}{1+10^{-(2.85-1.45 \cdot 10^{0.0028(25-T)})}} \right) \cdot 1.45 \cdot 10^{0.0028(25-T)}$$
(3-15-02)

(2) The highest four-day (4) average within the thirty-day (30) period should not exceed two point five (2.5) times the CCC. (3-15-02)

(3) Because the Department presumes that many waters in the state may have both spring-spawning and fall-spawning species of fish present, early life stages of fish may be present throughout much of the year. Accordingly, the Department will apply the CCC for when fish early life stages are present at all times of the year unless: (3-15-02)

(a) Time frames during the year are identified when early life stages are unlikely to be present, and (3-15-02)

(b) The Department is provided all readily available information supporting this finding such as the fish species distributions, spawning periods, nursery periods, and the duration of early life stages found in the water body; and (3-15-02)

(c) The Department determines early life stages are likely absent. (3-15-02)

e. Turbidity, below any applicable mixing zone set by the Department, shall not exceed background turbidity by more than fifty (50) NTU instantaneously or more than twenty-five (25) NTU for more than ten (10) consecutive days. (8-24-94)

f. Salmonid Spawning. The Department shall determine spawning periods on a waterbody specific basis taking into account knowledge of local fisheries biologists, published literature, records of the Idaho Department of Fish and Game, and other appropriate records of spawning and incubation, as further described in the current version of the "Water Body Assessment Guidance" published by the Idaho Department of Environmental Quality. Waters designated for salmonid spawning, in areas used for spawning and during the time spawning and incubation occurs, are not to vary from the following characteristics due to human activities: (3-30-07)

i. Dissolved Oxygen. (8-24-94)

(1) Intergravel Dissolved Oxygen. (8-24-94)

(a) One (1) day minimum of not less than five point zero (5.0) mg/l. (8-24-94)

(b) Seven (7) day average mean of not less than six point zero (6.0) mg/l. (8-24-94)

(2) Water-Column Dissolved Oxygen. (8-24-94)

(a) One (1) day minimum of not less than six point zero (6.0) mg/l or ninety percent (90%) of saturation, whichever is greater. (8-24-94)

ii. A maximum weekly maximum water temperatures (MWMT) of no more than thirteen (13) degrees C or less with a maximum daily average no greater than nine (9) degrees C. (8-24-94)

**g.** Bull Trout Temperature Criteria. Water temperatures for the waters identified under Subsection 250.02.g.i. shall not exceed thirteen degrees Celsius (13C) maximum weekly maximum temperature (MWMT) during June, July and August for juvenile bull trout rearing, and nine degrees Celsius (9C) daily average during September and October for bull trout spawning. For the purposes of measuring these criteria, the values shall be generated from a recording device with a minimum of six (6) evenly spaced measurements in a twenty-four (24) hour period. The MWMT is the mean of daily maximum water temperatures measured over the annual warmest consecutive seven (7) day period occurring during a given year. (3-30-01)

**i.** The bull trout temperature criteria shall apply to all tributary waters, not including fifth order main stem rivers, located within areas above fourteen hundred (1400) meters elevation south of the Salmon River basin-Clearwater River basin divide, and above six hundred (600) meters elevation north of the Salmon River basin-Clearwater River basin divide, in the fifty-nine (59) Key Watersheds listed in Table 6, Appendix F of Governor Batt's State of Idaho Bull Trout Conservation Plan, 1996, or as designated under Sections 110 through 160 of this rule. (3-23-98)

**ii.** No thermal discharges will be permitted to the waters described under Subsection 250.02.g.i. unless socially and economically justified as determined by the Department, and then only if the resultant increase in stream temperature is less than five-tenths degrees Celsius (0.5C). (4-5-00)

**h.** Kootenai River sturgeon temperature criteria. Water temperatures within the Kootenai River from Bonners Ferry to Shorty's Island, shall not exceed a seven (7) day moving average of fourteen degrees celsius (14C) based on daily average water temperatures, during May 1 through July 1. (3-23-98)

\*\*\*\*\* **BREAK IN CONTINUITY** \*\*\*\*\*

**278. LOWER BOISE RIVER SUBBASIN, HUC 17050114 SUBSECTION 150140.12.**

**01. Boise River, SW-1 and SW-5 -- Salmonid Spawning and Dissolved Oxygen.** The waters of the Boise River from Veterans State Park to its mouth will have dissolved oxygen concentrations of six (6) mg/l or seventy-five percent (75%) of saturation, whichever is greater, during the spawning period of salmonid fishes inhabiting those waters. (3-15-02)

**02. Indian Creek, SW-3b, Mason Creek, SW-6, and Sand Hollow Creek, SW-17 -- Modified Aquatic Life Use.** All numeric criteria applicable to the seasonal cold water aquatic life use apply with the exception of dissolved oxygen. Dissolved oxygen concentrations are to exceed four (4) mg/l at all times. (3-15-02)

**03. Fifteenmile Creek, SW-7; Tenmile Creek, SW-8, and Five Mile Creek, SW-10 -- Modified Aquatic Life Use.** All numeric criteria applicable to the seasonal cold water aquatic life use apply. (3-15-02)

**04. Boise River, SW-5 and SW-11a -- Copper and Lead Aquatic Life Criteria.** The water-effect ratio (WER) values used in the equations in Subsection 210.02 for calculating copper and lead CMC and CCC values shall be two and five hundred seventy-eight thousandths (2.578) for dissolved copper and two and forty-nine thousandths (2.049) for lead. These site-specific criteria shall apply to the Boise River from the Lander St. wastewater outfall to where the channels of the Boise River become fully mixed downstream of Eagle Island.(5-3-03)

**05. Indian Creek, SW-3a -- Site-Specific Criteria for Water Temperature.** A maximum weekly maximum temperature of thirteen degrees C (13°C) to protect mountain whitefish and rainbow trout spawning and incubation applies from October 15 through June 30.

**06. Boise River, SW-5 and SW-11a -- Site-Specific Criteria for Water Temperature.** A maximum weekly maximum temperature of thirteen degrees C (13°C) to protect brown trout, mountain whitefish, and rainbow trout spawning and incubation applies from October 1 through July 15.

\*\*\*\*\* BREAK IN CONTINUITY \*\*\*\*\*

**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 the water is designated for warm water aquatic life, the induced variation is more than plus two (+2) degrees C. (3-15-02)~~

~~**d.** If the water is designated for cold water aquatic life, seasonal cold water aquatic life, or salmonid spawning, the induced variation is more than plus one (+1) degree C. (3-15-02)~~

**ec.** 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 ~~Subsections 401.01.c. and 401.01.d. do not apply and instead~~ wastewater must not raise the receiving water temperatures by more than three tenths (0.3) degrees C. (4-11-06)

**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)