REVISED ADOPTED REGULATION OF THE

STATE ENVIRONMENTAL COMMISSION

LCB File No. R017-99

Effective September 27, 1999

EXPLANATION – Matter in ***italics*** is new; matter in brackets ~~[omitted material]~~ is material to be omitted.

AUTHORITY: §§ 1-9, NRS 445A.425 and 445A.520.

Section 1. Chapter 445A of NAC is hereby amended by adding thereto the provisions set forth as sections 2 and 3 of this regulation.

Sec. 2. ***"Annual mean flow" means a value calculated by:***

1. Determining the rate of flow of water at or near the location at which a sample of water is taken not more than once each day during a 365-day period;

2. Summing the amounts determined pursuant to subsection 1 during the 365-day period; and

3. Dividing the sum determined pursuant to subsection 2 by the total number of days the rate of flow of water is measured pursuant to subsection 1 during the 365-day period.

Sec. 3. ***"Flow weighted annual average concentration" means a value calculated by:***

1. Multiplying, not more than once each day during a 365-day period, the concentration of pollutants present in a sample of water by the rate of flow of the water at the location and time at which the sample is taken;

2. Summing the amounts determined pursuant to subsection 1 during a 365-day period;

3. Dividing the sum determined pursuant to subsection 2 by the total number of days the concentration of pollutants is measured pursuant to subsection 1 during a 365-day period; and

4. Dividing the amount determined pursuant to subsection 3 by the annual mean flow.

Sec. 4. NAC 445A.070 is hereby amended to read as follows:

445A.070 As used in NAC 445A.070 to 445A.348, inclusive, ***and sections 2 and 3 of this regulation,*** unless the context otherwise requires, the words and terms defined in NAC 445A.071 to 445A.116, inclusive, ***and sections 2 and 3 of this regulation,*** have the meanings ascribed to them in those sections.

Sec. 5. NAC 445A.120 is hereby amended to read as follows:

445A.120 1. NAC 445A.120 to ~~[445A.213,]~~ ***445A.225,*** inclusive, apply to all natural streams and lakes, reservoirs or impoundments on natural streams and other specified waterways, unless excepted on the basis of existing irreparable conditions which preclude such use. Man-made waterways, unless otherwise specified, must be protected for public health and the use for which the waterways were developed.

2. The quality of any waters receiving waste discharges must be such that no impairment of the beneficial usage of water occurs as the result of the discharge. Natural water conditions may, on occasion, be outside the limits established by standards. The standards adopted in NAC 445A.120 to ~~[445A.213,]~~ ***445A.225,*** inclusive, relate to the condition of waters as affected by discharges relating to the activities of man.

Sec. 6. NAC 445A.121 is hereby amended to read as follows:

445A.121 The following standards are applicable to all ***surface*** waters of the state:

1. Waters must be free from substances attributable to domestic or industrial waste or other controllable sources that will settle to form sludge or bottom deposits in amounts sufficient to be

unsightly, putrescent or odorous or in amounts sufficient to interfere with any beneficial use of the water.

2. Waters must be free from floating debris, oil, grease, scum and other floating materials attributable to domestic or industrial waste or other controllable sources in amounts sufficient to be unsightly or in amounts sufficient to interfere with any beneficial use of the water.

3. Waters must be free from materials attributable to domestic or industrial waste or other controllable sources in amounts sufficient to produce taste or odor in the water or detectable off-flavor in the flesh of fish or in amounts sufficient to change the existing color, turbidity or other conditions in the receiving stream to such a degree as to create a public nuisance or in amounts sufficient to interfere with any beneficial use of the water.

4. Waters must be free from high temperature, biocides, organisms pathogenic to human beings, toxic, corrosive or other deleterious substances attributable to domestic or industrial waste or other controllable sources at levels or combinations sufficient to be toxic to human, animal, plant or aquatic life or in amounts sufficient to interfere with any beneficial use of the water. Compliance with the provisions of this subsection may be determined in accordance with methods of testing prescribed by the department. If used as an indicator, survival of test organisms must not be significantly less in test water than in control water.

5. If toxic materials are known or suspected by the department to be present in a water, testing for toxicity may be required to determine compliance with the provisions of this section and effluent limitations. The department may specify the method of testing to be used. The failure to determine the presence of toxic materials by testing does not preclude a determination by the department, on the basis of other criteria or methods, that excessive levels of toxic materials are present.

6. Radioactive materials attributable to municipal, industrial or other controllable sources must be the minimum concentrations ~~[which]~~ ***that*** are physically and economically feasible to achieve. In no case must materials exceed the limits established in the 1962 Public Health Service Drinking Water Standards (or later amendments) or 1/30th of the MPC values given for continuous occupational exposure in the "National Bureau of Standards Handbook No. 69." The concentrations in water must not result in accumulation of radioactivity in plants or animals that result in a hazard to humans or harm to aquatic life.

7. Wastes from municipal, industrial or other controllable sources containing arsenic, barium, boron, cadmium, chromium, cyanide, fluoride, lead, selenium, silver, copper and zinc that are reasonably amenable to treatment or control must not be discharged untreated or uncontrolled into the waters of Nevada. In addition, the limits for concentrations of the chemical constituents must provide water quality consistent with the mandatory requirements of the 1962 Public Health Service Drinking Water Standards.

8. The specified standards are not considered violated when the natural conditions of the receiving water are outside the established limits, including periods of extreme high or low flow. Where effluents are discharged to such waters, the discharges are not considered a contributor to substandard conditions provided maximum treatment in compliance with permit requirements is maintained.

Sec. 7. NAC 445A.143 is hereby amended to read as follows:

445A.143 1. The State of Nevada will cooperate with the other Colorado River Basin states and the Federal Government to support and carry out the conclusions and recommendations adopted April 27, 1972, by the reconvened 7th session of the conference in the matter of pollution of interstate waters of the Colorado River and its tributaries.

2. Pursuant to subsection 1, the ~~[values]~~ ***flow weighted annual average concentrations*** for total dissolved solids in mg/l at the three lower main stem stations of the Colorado River are as follows:

FLUSH

Below Hoover Dam 723

Below Parker Dam 747

Imperial Dam 879

Sec. 8. NAC 445A.195 is hereby amended to read as follows:

445A.195 Lake Mead

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PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES AS DESIGNATED IN NAC 445A.194 (Most Stringent Use Listed First)
Temperature Single Value	ΔT 0°C [a]	ΔT 2°C [a]	Propagation of aquatic life, including, without limitation, a warmwater fishery.
pH Single Value	95% of samples not to exceed 8.8 SU	Within Range 6.5-9.0 SU	Propagation of aquatic life, including, without limitation, a warmwater fishery, recreation involving contact with water, propagation of wildlife, municipal or domestic supply, or both, industrial supply, irrigation and watering of livestock.
Dissolved Oxygen Single Value	—	≥5 mg/l in the epilimnion or average in water column during periods of nonstratification	Propagation of aquatic life, including, without limitation, a warmwater fishery, watering of livestock, recreation involving contact with water, recreation not involving contact with water, municipal or domestic supply, or both, and propagation of wildlife.
Chlorophyll a–µg/l	b		Recreation involving contact with water, propagation of aquatic life, including, without

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES AS DESIGNATED IN NAC 445A.194 (Most Stringent Use Listed First)
			limitation, a warmwater fishery, recreation not involving contact with water and municipal or domestic supply, or both.
Un-Ionized Ammonia–mg/l	—	c	Propagation of aquatic life, including, without limitation, a warmwater fishery.
Total Dissolved Solids Single Value	Flow Weighted Annual Average ***Concentration*** ≤723 mg/l measured below Hoover Dam[d] —	— ≤1000 mg/l	Municipal or domestic supply, or both, and irrigation.
Chloride Single Value	e	≤400 mg/l [e]	Municipal or domestic supply, or both, watering of livestock and propagation of wildlife.
Sulfate Single Value	e	≤500 mg/l [e]	Municipal or domestic water supply, or both.
Suspended Solids Single Value	—	≤25 mg/l	Propagation of aquatic life, including, without limitation, a warmwater fishery, and recreation not involving contact with water.
Nitrogen Species as N Single Value	Total Inorganic Nitrogen 95% of Samples ≤4.5 mg/l	Nitrate ≤ 10 mg/l Nitrite ≤1 mg/l	Municipal or domestic supply, or both, watering of livestock, propagation of aquatic life, including, without limitation, a warmwater fishery, and propagation of wildlife.
Turbidity Single Value	f	≤25 NTU	Propagation of aquatic life, including, without limitation, a warmwater fishery, municipal or domestic supply, or both, recreation involving contact with water and recreation not involving contact with water.
Fecal Coliform		≤200/400[g] MF or MPN/100 ml	Recreation involving contact with water, irrigation, recreation not involving contact with water, municipal or domestic supply, or both, propagation of wildlife and watering of

FLUSH

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES AS DESIGNATED IN NAC 445A.194 (Most Stringent Use Listed First)
			livestock.
E. Coli 30-day Log Mean Single Value	— —	≤126 MF/100 ml ≤235 MF/100 ml	Recreation involving contact with water, recreation not involving contact with water, municipal or domestic supply, or both, irrigation and watering of livestock.
Color-Pt-Co Units Single Value	h	—	Recreation not involving contact with water and municipal or domestic supply, or both.

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FLUSH a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone.

FLUSH b. The requirements for chlorophyll a are:

(1) Not more than one monthly mean in a calendar year at Station 3 may exceed 45µg/l.

(2) The mean for chlorophyll a in summer (July 1-September 30) must not exceed 40 µg/l at Station 3, and the mean for 4 consecutive summer years must not exceed 30 µg/l. The sample must be collected from the center of the channel and must be representative of the top 5 meters of the channel. “Station 3” means the center of the channel at which the depth is from 16 to 18 meters.

(3) The mean for chlorophyll a in the growing season (April 1-September 30) must not exceed 16 µg/l at LM4 and 9 µg/l at LM5. LM4 is located just outside of the Las Vegas Bay launch ramp and marina, next to buoy RW “1.” LM5 is located next to buoy RW “A” with the southshore landmark of Cresent Island.

(4) The mean for chlorophyll a in the growing season (April 1-September 30) must not exceed 5 µg/l in the open water of Boulder Basin, Virgin Basin, Gregg Basin and Pierce Basin. The single value must not exceed 10 µg/l for more than 5 percent of the samples.

(5) Not less than two samples per month must be collected between the months of March and October. During the months when only one sample is available, that value must be used in place of the monthly mean.

FLUSH c. See footnote b to NAC 445A.197.

FLUSH d. The details of this standard are set forth in the "1996 Review-Water Quality Standards for Salinity, Colorado River System" approved by the commission on March 25, 1998.

FLUSH e. The combination of this constituent with other constituents comprising TDS must not result in the violation of the TDS standards for Lake Mead and the Colorado River.

FLUSH f. Turbidity must not exceed that characteristic of natural conditions by more than 10 Nephelometric Units.

FLUSH g. Based on a minimum of not less than five samples taken over a 30-day period, the fecal coliform bacterial level must not exceed a log mean of 200 per 100 ml nor must more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml.

FLUSH h. Color must not exceed that characteristic of natural conditions by more than 10 units Platinum-Cobalt Scale.

FLUSH The commission recognizes that at entrances of tributaries to Lake Mead, localized violations of standards may occur.

Sec. 9. NAC 445A.213 is hereby repealed.

FLUSH **TEXT OF REPEALED SECTION**

445A.213 Minimum quality criteria applicable to interstate waters. The minimum quality criteria applicable to interstate waters at agreed state line sampling points are as follows:

1. Waters must be free from substances attributable to domestic or industrial waste or other controllable sources that will settle to form sludge or bottom deposits in amounts sufficient to be unsightly, putrescent or odorous or in amounts sufficient to interfere with any beneficial use of the water.

2. Waters must be free from floating debris, oil, grease, scum and other floating materials attributable to domestic or industrial waste or other controllable sources in amounts sufficient to be unsightly or in amounts sufficient to interfere with any beneficial use of the water.

3. Waters must be free from materials attributable to domestic or industrial waste or other controllable sources in amounts sufficient to produce taste or odor in the water or detectable off-flavor in the flesh of fish or in amounts sufficient to change the existing color, turbidity or other conditions in the receiving stream to such degree as to create a public nuisance or in amounts sufficient to interfere with any beneficial use of the water.

4. Waters must be free from high temperature, biocides, organisms pathogenic to human beings, toxic, corrosive or other deleterious substances attributable to domestic or industrial waste or other controllable sources at levels or combinations sufficient to be toxic to human, animal, plant or aquatic life or in amounts sufficient to interfere with any beneficial use of the water.

5. Radioactive materials attributable to municipal, industrial or other controllable sources must be minimum concentrations which are physically and economically feasible to achieve. In no case must materials exceed the 1/10 of the 168-hour values for other radioactive substances specified in National Bureau of Standards Handbook 69.

6. Wastes from municipal or industrial or other controllable sources containing arsenic, barium, boron, cadmium, chromium, cyanide, fluoride, lead, selenium, silver, copper and zinc that are reasonably amendable to treatment or control must not be discharged untreated or uncontrolled into the Colorado River System. At agreed points of sampling above Imperial Dam in the Colorado River System the limits for concentrations of these chemical constituents will be set at values that recognize their cumulative effects and which will provide river water quality

consistent with the mandatory requirements of the 1962 Public Health Service Drinking Water Standards.

7. The dissolved oxygen content and pH value of the waters of the Colorado River System must be maintained at levels necessary to support the natural and developed fisheries.