LCB File No. R159-06

PROPOSED REGULATION OF THE STATE ENVIRONMENTAL COMMISSION

P2006-13

Colorado River Salinity Standards

Explanation – Matter in ***Bold*** is new; matter in bold red and strikeout **[**~~omitted material~~**]** is material to be omitted.

Section 1. Chapter 445A.143 is hereby amended to read as follows.

NAC 445A.143 Cooperation regarding Colorado River; salinity standards

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 the **[**~~subsection 1~~**]** ***Colorado River Basin Salinity Control Forum presented in the "2005 Review - Water Quality Standards for Salinity, Colorado River System"***, the flow weighted annual average concentrations ***(calendar year)*** for total dissolved solids in mg/l at the three lower main stem stations of the Colorado River are as follows:

BELOW HOOVER DAM	723
BELOW PARKER DAM	747
IMPERIAL DAM	879

Section 2. Chapter 445A.195 is hereby amended to read as follows.

NAC 445A.195 Lake Mead excluding area covered by NAC 445A.197.

Lake Mead

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	□T 0°C [a]	≤ T 2°C [a]	Propagation of aquatic life, including, without limitation, a warm-water 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 warm-water 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 warm-water 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 limitation, a warm-water fishery, recreation not involving contact with water and municipal or domestic supply, or both.
Total Ammonia (as N)-mg/l	—	c	Propagation of aquatic life, including, without limitation, a warm-water 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 warm-water 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 warm-water fishery, and propagation of wildlife.
Turbidity Single Value	f	≤ 25 NTU	Propagation of aquatic life, including, without limitation, a warm-water 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/100ml	Recreation involving contact with water, irrigation, recreation not involving contact with water, municipal or domestic supply, or both, propagation of wildlife and watering of livestock.

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)
E. Coli 30-day Log Mean Single Value	 — —	 ≤ 126 MF/100ml ≤ 235 MF/100ml	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.

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

b. The requirements for chlorophyll a are:

(1) Not more than one monthly mean in a calendar year at Station LWLVB 1.85 may exceed 45µg/l. "Station LWLVB 1.85" is located at the center of the channel at a distance of 1.85 miles into Las Vegas Bay from the confluence of the Las Vegas Wash with Lake Mead.

(2) The mean for chlorophyll a in summer (July 1-September 30) must not exceed 40 µg/l at Station LWLVB 1.85, 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 LWLVB 1.85" is located at the center of the channel at a distance of 1.85 miles into Las Vegas Bay from the confluence of the Las Vegas Wash with Lake Mead.

(3) The mean for chlorophyll a in the growing season (April 1-September 30) must not exceed 16 µg/l at Station LWLVB 2.7 and 9 µg/l at Station LWLVB 3.5. "Station LWLVB 2.7" is located at a distance of 2.7 miles into Las Vegas Bay from the confluence of the Las Vegas Wash with Lake Mead. "Station LWLVB 3.5" is located at a distance of 3.5 miles into Las Vegas Bay from the confluence of the Las Vegas Wash with Lake Mead.

(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.

c. The requirement for water quality with regard to the concentration of total ammonia is provided pursuant to the provisions of NAC 445A.118.

d. ***The salinity standard for the Colorado River System is specified in NAC 445A.143.*** ~~[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.]~~

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.

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

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 100ml nor must more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.

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

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

Section 3. Chapter 445A.197 is hereby amended to read as follows.

NAC 445A.197 Lake Mead from 1.2 miles into Las Vegas Bay from confluence of Las Vegas Wash with Lake Mead. Control point at 1.2 miles into Las Vegas Bay from the confluence of the Las Vegas Wash with Lake Mead.

Inner Las Vegas Bay

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES AS DESIGNATED IN NAC 445A.196 (Most Stringent Use Listed First)
Temperature Single Value	□T 0°C [a]	≤ T 2°C [a]	Propagation of aquatic life, including, without limitation, a warm-water fishery.
pH Single Value	95% of samples not to exceed 8.9 SU	Within Range 6.5-9.0 SU	Propagation of aquatic life, including, without limitation, a warm-water fishery, propagation of wildlife, irrigation, industrial supply and watering of livestock.
Dissolved Oxygen Single Value	—	≥ 5 mg/l	Propagation of aquatic life, including, without limitation, a warm-water fishery, watering of livestock, recreation not involving contact with water and propagation of wildlife.
Nitrogen Species as Single Value	Total Inorganic Nitrogen 95% of Samples □5.3 mg/l	Nitrate ≤ 90 mg/l Nitrite ≤ 5 mg/l	Propagation of aquatic life, including, without limitation, a warm-water fishery, watering of livestock and propagation of wildlife.
Total Ammonia (as N)-mg/l	—	b	Propagation of aquatic life, including, without limitation, a warm-water fishery.
Total Dissolved Solids Single Value	c	≤ 3000 mg/l	Watering of livestock and irrigation.
Suspended Solids Single Value	—	≤ 25 mg/l	Propagation of aquatic life, including, without limitation, a warm-water fishery and recreation not involving contact with water.
Turbidity Single Value	d	≤ 25 NTU	Propagation of aquatic life, including, without limitation, a warm-water fishery and recreation not involving contact with water.
Fecal Coliform MF or MPN/100ml Single Value	—	e	Propagation of wildlife, recreation not involving contact with water, irrigation and watering of livestock.

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

b. The requirement for water quality with regard to the concentration of total ammonia is provided pursuant to the provisions of NAC 445A.118. Data must be collected at Station LWLVB 1.2. "Station LWLVB 1.2" is located at the center of the channel at a distance of 1.2 miles into Las Vegas Bay from the confluence of the Las Vegas Wash with Lake Mead.

c. ***The salinity standard for the Colorado River System is specified in NAC 445A.143.*** ~~[Any increase in total dissolved solids must not result in a violation of the standards set forth in "1996 Review Water Quality Standards for Salinity, Colorado River System" approved by the Commission on March 25, 1998.]~~

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

e. Any discharge from a point source into the Las Vegas Wash must not exceed a log mean of 200 per 100ml based on a minimum of not less than five samples taken over a 30-day period nor may more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100ml.

The Commission recognizes that, because of discharges of tributaries, localized violations of standards may occur in the inner Las Vegas Bay.