

**PROPOSED REGULATION OF  
THE STATE ENVIRONMENTAL COMMISSION OF  
THE STATE DEPARTMENT OF CONSERVATION  
AND NATURAL RESOURCES**

**LCB File No. R062-98**

May 13, 1998

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

AUTHORITY: §§ 1-8, NRS 445A.425 and 445A.520.

**Section 1.** NAC 445A.194 is hereby amended to read as follows:

445A.194 *1. The requirements to maintain existing higher quality become effective when the existing water quality is higher than the water quality standard for beneficial uses, as determined by the commission. Once the requirements to maintain existing higher quality become effective, the requirements are applicable thereafter. The requirements to maintain existing higher quality for the area of Lake Mead which is not covered by NAC 445A.197 are set forth in NAC 445A.195, and include, without limitation, requirements relating to temperature, pH, chlorophyll a, total dissolved solids, chloride, sulfate, total inorganic nitrogen, turbidity and color.*

*2. The water quality standards for beneficial uses for the area of Lake Mead which is not covered by NAC 445A.197 are [prescribed] set forth in NAC 445A.195 [.] , and include, without limitation, standards relating to temperature, pH, dissolved oxygen, un-ionized*

*ammonia, total dissolved solids, chloride, sulfate, suspended solids, nitrate, nitrite, turbidity, fecal coliform and e. coli.* The beneficial uses for this area are:

- [1.] (a) Irrigation;
- [2.] (b) Watering of livestock;
- [3.] (c) Recreation involving contact with the water;
- [4.] (d) Recreation not involving contact with the water;
- [5.] (e) Industrial supply;
- [6.] (f) Municipal or domestic supply, or both;
- [7.] (g) Propagation of wildlife; and
- [8.] (h) Propagation of aquatic life, including , *without limitation*, a warmwater fishery.

**Sec. 2.** NAC 445A.195 is hereby amended to read as follows:

445A.195

## [WATER QUALITY STANDARDS<sup>j</sup>]

### Lake Mead

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES <i>AS DESIGNATED IN NAC 445A.194 (Most Stringent Use Listed First)</i>
Temperature [ <sup>o</sup> C Δ T Single Value <sup>e</sup> ] Single Value	[0] ΔT 0 <sup>o</sup> C <sup>a</sup>	[2] ΔT 2 <sup>o</sup> C <sup>a</sup>	[Warmwater fishery. <sup>b</sup> ] Propagation of aquatic life, including, without limitation, a warmwater fishery.
pH [Standard Units] Single Value	95% of samples not to exceed 8.8 SU	Within Range [7.0] 6.5 - 9.0 SU	[Bathing and water contact sports, <sup>b</sup> wildlife propagation, <sup>b</sup> warmwater fishery, aquatic life, drinking water supply, industrial supply, agricultural use.] 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 [mg/l] Single Value [in 90% of Samples]	--	≥5 mg/l in the epilimnion [≥5 mg/l] or average in water column during periods of non-stratification	[Warmwater fishery, <sup>b</sup> aquatic life, stock watering, bathing & contact sports, noncontact sports & esthetics, drinking water supply, wildlife propagation.] 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 <u>a</u> - μg/l	[c, k] <sup>b</sup>		[Bathing and water contact sports, <sup>b</sup> warmwater fishery, <sup>b</sup> aquatic life, <sup>b</sup> noncontact sports & esthetics, <sup>b</sup> drinking water supply. <sup>b</sup> ] Recreation involving contact with water, propagation of aquatic life, including, without limitation, a warmwater fishery, recreation not involving contact with water and municipal or domestic supply, or both.
Un-Ionized Ammonia - mg/l	--	[d] <sup>c</sup>	[Warmwater fishery, <sup>b</sup> aquatic life.] Propagation of aquatic life, including, without limitation, a warmwater fishery.
Total Dissolved Solids [- mg/l Flow Weighted Annual Average]  Single Value	Flow Weighted Annual Average ≤723 mg/l measured below Hoover [Dam <sup>h</sup> ] Dam <sup>d</sup> --	--  ≤1000 mg/l	[Drinking water supply, <sup>b</sup> agricultural use.] Municipal or domestic supply, or both, and irrigation.
Chloride [- mg/l] Single Value	e	≤400 mg/l <sup>e</sup>	[Drinking water supply, <sup>b</sup> stock watering, wildlife propagation.] Municipal or domestic supply, or both, watering of livestock and propagation of wildlife.

Sulfate [- mg/l] Single Value	e	≤500 mg/l <sup>e</sup>	[Drinking water supply. <sup>b</sup> ] <i>Municipal or domestic water supply, or both.</i>
Suspended Solids [- mg/l] Single Value	--	≤25 mg/l	[Warmwater fishery <sup>b</sup> , aquatic life, esthetics.] <i>Propagation of aquatic life, including, without limitation, a warmwater fishery, and recreation not involving contact with water.</i>
Nitrogen Species as N [- mg/l] Single Value [in 90% of Samples]	Total Inorganic Nitrogen 95% of Samples ≤4.5 mg/l	Nitrate 10 mg/l  Nitrite ≤1 mg/l	[Drinking water supply <sup>b</sup> , stock watering, warmwater fishery, aquatic life, wildlife propagation.  Wildlife propagation.] <i>Municipal or domestic supply, or both, watering of livestock, propagation of aquatic life, including, without limitation, a warmwater fishery, and propagation of wildlife.</i>
Turbidity [- NTU] Single Value	f	≤25 NTU	[Warmwater fishery, <sup>b</sup> aquatic life, drinking water supply, esthetics, bathing & water contact sports.] <i>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.</i>
Fecal Coliform [MF/100 ml]		≤200/400 <sup>e</sup> MF or MPN/100 ml	[Bathing & water contact sports, <sup>b</sup> agricultural use, noncontact sports & esthetics, drinking water supply, wildlife propagation.] <i>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.</i>
<i>E. Coli</i> 30-day Log Mean Single Value	-- --	≤126 MF/100 ml ≤235 MF/100 ml	<i>Recreation involving contact with water, recreation not involving contact with water, municipal or domestic supply, or both, irrigation and watering of livestock.</i>
Color-Pt-Co Units Single Value	[i] h	--	[Esthetics, <sup>b</sup> drinking water supply. <sup>b</sup> ] <i>Recreation not involving contact with water and municipal or domestic supply, or both.</i>

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

[b. The most significant beneficial uses.

c.] 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] *September 30*) must not exceed 40  $\mu\text{g/l}$  at Station 3, and the mean for 4 consecutive summer years must not exceed 30  $\mu\text{g/l}$ . [“Mean” indicates the average of not less than 2 samples per month. The samples must consist of the average of the data] *The sample must be* collected from [not less than 3 sites within a cross section of Station 3 that are] *the center of the channel and must be* representative of the top 5 meters of the cross section. “Station 3” means the center of the channel at which *the* depth is from 16 to 18 meters.

[d.]

(3) *The mean for chlorophyll a in the growing season (April 1-September 30) must not exceed 16  $\mu\text{g/l}$  at LM4 and 9  $\mu\text{g/l}$  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 Crescent Island.*

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

(5) *During months when only one sample is available, that value must be used in place of the monthly mean.*

c. See footnote [c] b to NAC 445A.197.

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.*

- 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 100 ml. nor must more than 10 percent of the total samples taken during any 30-day period exceed 400 per 100 ml.
- [h. The details of this standard are specified in the “1981 Review - Water Quality Standards for Salinity, Colorado River System,” approved by the state environmental commission on June 8, 1982.
- i.] h. Color must not exceed that characteristic of natural conditions by more than 10 units Platinum-Cobalt Scale.
- [j. The Commission] *The commission* recognizes that at entrances of tributaries to this reach, localized violations of standards may occur.
- [k. The mean for chlorophyll a in the growing season (April-September) must not exceed 5  $\mu\text{g/l}$  in the open water of Boulder Basin, Virgin Basin, Gregg Basin and Pierce Basin. The single value must not exceed 10  $\mu\text{g/l}$  for more than 10 percent of the samples. “Mean” indicates the average of not less than 2 samples per month.

The “Guidelines for Formulating Water Quality Standards for the Interstate Waters of the Colorado River System,” adopted January 13, 1967, are incorporated as a supplement to the standards for this stream.]

**Sec. 3.** NAC 445A.196 is hereby amended to read as follows:

445A.196 1. *The requirements to maintain existing higher quality become effective when the existing water quality is higher than the water quality standard for beneficial uses, as determined by the commission. Once the requirements to maintain existing higher quality become effective, the requirements are applicable thereafter. For the area of Lake Mead from the western boundary of the Las Vegas Bay Campground to the confluence of the Las Vegas Wash, the requirements to maintain existing higher quality are set forth in NAC 445A.197, and include, without limitation, requirements relating to temperature, pH, total inorganic nitrogen, total dissolved solids and turbidity.*

2. The water quality standards *for beneficial uses* for Lake Mead from the western boundary of the Las Vegas [Marina] Bay Campground to the confluence of the Las Vegas Wash are [prescribed] *set forth* in NAC 445A.197 [.] , *and include, without limitation, standards relating to temperature, pH, dissolved oxygen, nitrate, nitrite, un-ionized ammonia, total dissolved solids, suspended solids, turbidity and fecal coliform.* The beneficial uses for this area are:

- [1.] (a) Irrigation;
- [2.] (b) Watering of livestock;
- [3.] (c) Recreation not involving contact with the water;
- [4.] (d) Industrial supply;

[5.] (e) Propagation of wildlife; and

[6.] (f) Propagation of aquatic life, including , *without limitation*, a warmwater fishery.

3. *The goal of the requirements of subsection 1 and the standards of subsection 2 is to ensure that all of Lake Mead is fishable and swimmable by the next triannual review required by the Clean Water Act, 33 U.S.C. §§ 1251 et seq.*

**Sec. 4.** NAC 445A.197 is hereby amended to read as follows:

445A.197 Control point at the Western Boundary of the Las Vegas [Marina] Bay  
Campground.



**[WATER QUALITY STANDARDS<sup>f</sup>]**

*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 [ <sup>o</sup> C Δ T Single Value <sup>a</sup> ] Single Value	[0] ΔT 0 <sup>o</sup> C <sup>a</sup>	[2] ΔT 2 <sup>o</sup> C <sup>a</sup>	[Warmwater fishery. <sup>b</sup> ] Propagation of aquatic life, including, without limitation, a warmwater fishery.
pH [- Standard Units] Single Value	95% of samples not to exceed 8.9 SU	Within Range [7.0] 6.5 - 9.0 SU	[Wildlife propagation, <sup>b</sup> agricultural use, warmwater fishery, aquatic life, industrial supply.] Propagation of aquatic life, including, without limitation, a warmwater fishery, propagation of wildlife, irrigation, industrial supply and watering of livestock.
Dissolved Oxygen [-mg/l] Single Value [in 90% of Samples]	--	≥5 mg/l	[Warmwater fishery, <sup>b</sup> aquatic life, stock watering, noncontact sports & esthetics, wildlife propagation.] Propagation of aquatic life, including, without limitation, a warmwater fishery, watering of livestock, recreation not involving contact with water and propagation of wildlife.
Nitrogen Species as [N mg/l] Single Value [in 90% of samples Single Value]	Total Inorganic Nitrogen 95% of Samples ≤5.3 mg/l	Nitrate ≤90 mg/l  Nitrite [≤10] ≤5 mg/l	[Warmwater fishery, <sup>b</sup> stock watering, wildlife propagation.  Stock watering, <sup>b</sup> wildlife propagation. <sup>b</sup> ] Propagation of aquatic life, including, without limitation, a warmwater fishery, watering of livestock and propagation of wildlife.
Un-Ionized Ammonia as N -mg/l	--	[c] b	[Warmwater fishery, <sup>b</sup> aquatic life. <sup>b</sup> ] Propagation of aquatic life, including, without limitation, a warmwater fishery.
Total Dissolved Solids [- mg/l] Single Value	[e] c	≤3000 mg/l	[Stock watering, <sup>b</sup> irrigation.] Watering of livestock and irrigation.
Suspended Solids [- mg/l] Single Value	--	≤25 mg/l	[Warmwater fishery, <sup>b</sup> aquatic life, esthetics.] Propagation of aquatic life, including, without limitation, a warmwater fishery and recreation not involving contact with water.
Turbidity [- NTU] Single Value	d	≤25 NTU	[Warmwater fishery, <sup>b</sup> aquatic life, esthetics.] Propagation of aquatic life, including, without limitation, a warmwater fishery and recreation not involving contact with water.

Fecal Coliform [MF/100 ml] MF or MPN/100 ml Single Value	--	[g] e	[Agricultural use, <sup>b</sup> wildlife propagation, <sup>b</sup> noncontact sports & esthetics.] <i>Propagation of wildlife, recreation not involving contact with water, irrigation and watering of livestock.</i>
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a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone.

[b. The most significant beneficial uses.

c.] b. The 4-day average for the concentration of un-ionized ammonia must not exceed 0.05 mg/l more often than once every 3 years. The daily value for this average must [consist of the average of the data collected from not less than 3 sites within a cross section of Station 2 that are representative of the top 2.5 meters of the cross section, and must] account for diurnal fluctuation. *Data must be collected at Station 2 from at least three locations between the surface and total depth.* This [average] standard is not applicable to the area between Station 2 and the confluence of the Las Vegas Wash. The single value must not exceed 0.45 mg/l more often than once every 3 years. [When the temperature exceeds 20°C, these standards must be adjusted pursuant to methods accepted by the United States Environmental Protection Agency.] “Station 2” means the center of the channel at which the depth is 10 meters.

c. *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 increase in Total Dissolved Solids must not result in a violation of the standards specified in “1981 Review-Water Quality Standards for Salinity, Colorado River System,” approved by the state environmental commission on June 8, 1982.
- f. The Commission recognizes that because of discharges of tributaries that localized violations of standards may occur in this reach.
- g.] Any discharge from a point source into Las Vegas Wash must not exceed a log mean of 200 per 100 ml. 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 100 ml.  
  
[The “Guidelines for Formulating Water Quality Standards for the Interstate Waters of the Colorado River System,” adopted January 13, 1967, are incorporated as a supplement to the standards for this stream. The guidelines may be obtained from the division of environmental protection at no cost.]

*The commission recognizes that, because of discharges of tributaries, localized violations of standards may occur in this reach.*

**Sec. 5.** NAC 445A.198 is hereby amended to read as follows:

445A.198 *1. The requirements to maintain existing higher quality become effective when the existing water quality is higher than the water quality standard for beneficial uses, as determined by the commission. Once the requirements to maintain existing higher quality become effective, the requirements are applicable thereafter. For the area of the Las Vegas Wash from Telephone Line Road to the confluence of the discharges from the Clark county wastewater treatment plant and the City of Las Vegas wastewater treatment plant discharge,*

*which encompasses the City of Henderson wastewater treatment plant discharge, the requirements to maintain existing higher quality are set forth in NAC 445A.199, and include, without limitation, requirements relating to temperature, pH, total inorganic nitrogen and total dissolved solids.*

2. The water quality standards *for beneficial uses* for the Las Vegas Wash from [Pabco] Telephone Line Road to the confluence of the discharges from the [city and county sewage treatment plants are prescribed] Clark county wastewater treatment plant and the City of Las Vegas wastewater treatment plant discharge, which encompasses the City of Henderson wastewater treatment plant discharge, are set forth in NAC 445A.199 [.] , and include, without limitation, standards relating to pH, dissolved oxygen, nitrate, nitrite, total suspended solids, total dissolved solids and fecal coliform. The beneficial uses for this area are:

[1.] (a) Irrigation;

[2.] (b) Watering of livestock;

[3.] (c) Recreation not involving contact with the water;

[4.] (d) Maintenance of a freshwater marsh;

[5.] (e) Propagation of wildlife; and

[6.] (f) Propagation of aquatic life, excluding fish. This *paragraph* does not preclude the establishment of a fishery.

**Sec. 6.** NAC 445A.199 is hereby amended to read as follows:

445A.199 Control point at [Pabco] Telephone Line Road. The limits in this table apply from [Pabco] Telephone Line Road to the confluence of the discharges from the [city and

county sewage] *City of Las Vegas and Clark County wastewater treatment plants [.] , which encompasses the City of Henderson wastewater treatment plant discharge.*

*Las Vegas Wash-Upper Reach*

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARD FOR BENEFICIAL USES	BENEFICIAL USES <i>AS DESIGNATED IN NAC 445A.198 (Most Stringent Use Listed First)</i>
Temperature [(°C) Δ T Single Value <sup>a</sup> ] <i>Single Value</i>	[0] ΔT 0°C <sup>a</sup>	--	--
pH - [Standard Units] Single Value [of 90% of samples]	95% of Samples Within Range 6.5 - 7.8 <i>SU</i>	Within Range 6.5 - 9.0 <i>SU</i>	[Wildlife propagation, <sup>d</sup> agricultural uses. <sup>d</sup> ] <i>Propagation of aquatic life, excluding fish, propagation of wildlife, irrigation and watering of livestock.</i>
Dissolved Oxygen-mg/l	--	b	[Stock watering, <sup>d</sup> noncontact sports & esthetics, <sup>d</sup> wildlife propagation.] <i>Propagation of aquatic life, excluding fish, watering of livestock, recreation not involving contact with water and propagation of wildlife.</i>
Nitrogen Species as [N-mg/l] N Single Value [in 90% of samples]	Total Inorganic Nitrogen 95% of Samples ≤20 mg/l	Nitrate ≤100 mg/l  Nitrite ≤10 mg/l	[Stock watering, <sup>d</sup> wildlife propagation. <sup>d</sup> ] <i>Watering of livestock and propagation of wildlife.</i>
<i>Total Suspended Solids</i>		≤135 mg/l <sup>c</sup>	<i>Propagation of aquatic life, excluding fish.</i>
Total [Filterable Residue] Dissolved Solids at 180°C [-mg/l] Single Value [in 90% of samples]	[≤2300] 95% of samples ≤1900 mg/l	≤3000 mg/l	[Stock water, <sup>d</sup> irrigation, freshwater marsh maintenance.] <i>Watering of livestock, irrigation and maintenance of a freshwater marsh.</i>
Fecal Coliform [MF/100 ml] <i>MF or MPN/100 ml</i>	--	[c] <i>d</i>	[Noncontact sports, <sup>d</sup> esthetics, <sup>d</sup> wildlife propagation, agricultural use.] <i>Recreation not involving contact with water, propagation of wildlife, irrigation and watering of livestock.</i>

- a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone except during storm flow conditions.
- b. [It is known that aerobic] *Aerobic* conditions are desirable for the beneficial uses of [stock watering, noncontact sports and esthetics, and wildlife propagation. Existing conditions prevent the attainment of aerobic conditions as of September 9, 1982. Therefore] *propagation of aquatic life, excluding fish, watering of livestock, recreation not involving contact with water and propagation of wildlife. So as not to prevent the development and restoration of marshes and wetlands in the Wash, aerobic conditions are established as a*

goal rather than a standard and *the goal* is not intended to preclude development of a limited fishery in selected areas. Aerobic conditions is intended to mean the absence of objectionable odors that may be caused by wastewater discharges in excess of existing odors.

- c. *Total suspended solids standard does not apply when flows are greater than 110 percent of average flow as measured at the nearest gage. Average flow is defined as the 12-month rolling average of the average monthly flow.*
- d. Any discharge from a point source into Las Vegas Wash must not exceed a log mean of 200 per 100 ml. 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 100 ml.

**[d. The most significant beneficial uses.]**

**Sec. 7.** NAC 445A.200 is hereby amended to read as follows:

445A.200 1. *The requirements to maintain existing higher quality become effective when the existing water quality is higher than the water quality standard for beneficial uses, as determined by the commission. Once the requirements to maintain existing higher quality become effective, the requirements are applicable thereafter. For the area from the confluence of the Las Vegas Wash with Lake Mead to Telephone Line Road, the requirements to maintain existing higher quality are set forth in NAC 445A.201, and include, without limitation, requirements relating to temperature, pH, total inorganic nitrogen and total dissolved solids.*

2. The water quality standards *for beneficial uses* for the Las Vegas Wash from [**Pabco Road to**] the confluence of Las Vegas Wash with Lake Mead *to Telephone Line Road* are

**[prescribed]** *set forth* in NAC 445A.201 [.] , *and include, without limitation, standards relating to pH, dissolved oxygen, nitrate, nitrite, total suspended solids, total dissolved solids and fecal coliform.* The beneficial uses for this area are:

[1.] (a) Irrigation;

[2.] (b) Watering of livestock;

[3.] (c) Recreation not involving contact with the water;

[4.] (d) Maintenance of a freshwater marsh;

[5.] (e) Propagation of wildlife; and

[6.] (f) Propagation of aquatic life, excluding fish. This *paragraph* does not preclude the establishment of a fishery.

**Sec. 8.** NAC 445A.201 is hereby amended to read as follows:

445A.201 The limits in this table apply from **[Pabco Road to]** the confluence of the Las Vegas Wash with Lake Mead *to Telephone Line Road.*



**[WATER QUALITY STANDARDS]**

Las Vegas Wash - *Lower Reach*

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES <i>AS DESIGNATED IN NAC 445A.200 (Most Stringent Use Listed First)</i>
Temperature [(°C) Δ T Single Value <sup>a</sup> ] <i>Single Value</i>	[0] ΔT 0°C <sup>a</sup>	--	--
pH [- Standard Units] Single Value [of 90% of samples]	95% of Samples Within Range 7.2 - 8.7 SU	Within Range [7.0] 6.5 - 9.0 SU	[Wildlife propagation, <sup>d</sup> agricultural uses. <sup>d</sup> ] <i>Propagation of aquatic life, excluding fish, propagation of wildlife, irrigation and watering of livestock.</i>
Dissolved Oxygen mg/l		b	[Stock watering, <sup>d</sup> noncontact sports & esthetics, <sup>d</sup> wildlife propagation. <sup>d</sup> ] <i>Propagation of aquatic life, excluding fish, watering of livestock, recreation not involving contact with water and propagation of wildlife.</i>
Nitrogen Species as [N-mg/l] N Single Value [in 90% of samples]	Total Inorganic Nitrogen 95% of Samples ≤17 mg/l	Nitrate Nitrite ≤100 mg/l ≤10 mg/l	[Stock watering, <sup>d</sup> wildlife propagation. <sup>d</sup> ] <i>Watering of livestock and propagation of wildlife.</i>
<i>Total Suspended Solids</i>		≤135 mg/l <sup>c</sup>	<i>Propagation of aquatic life, excluding fish.</i>
Total [Filterable Residue] Dissolved Solids at 180°C [-mg/l] Single Value [in 90% of samples]	[≤2600] 95% of samples ≤2400 mg/l	≤3000 mg/l	[Stock water, <sup>d</sup> irrigation, freshwater marsh maintenance.] <i>Watering of livestock, irrigation and maintenance of a freshwater marsh.</i>
Fecal Coliform [MF/100 ml] <i>MF or MPN/100 ml</i>	--	[c] d	[Noncontact sports, esthetics, <sup>d</sup> wildlife propagation, <sup>d</sup> agricultural use.] <i>Recreation not involving contact with water, propagation of wildlife, irrigation and watering of livestock.</i>

- a. Maximum allowable increase in temperature above receiving water temperature at the boundary of an approved mixing zone.
- b. [It is known that aerobic] *Aerobic* conditions are desirable for the beneficial uses of [stock watering, noncontact sports and esthetics, and wildlife propagation. Existing conditions prevent the attainment of aerobic conditions at this time. Therefore] *propagation of aquatic life, excluding fish, watering of livestock, recreation not involving contact with the*

*water and propagation of wildlife. So as not to prevent the development and restoration of marshes and wetlands in the Wash,* aerobic conditions are established as a goal rather than a standard and *the goal* is not intended to preclude development of a limited fishery in selected areas. Aerobic conditions is intended to mean the absence of objectionable odors that may be caused by wastewater discharges in excess of existing odors.

- c. *This standard does not apply when flows are greater than 110 percent of average flow as measured at the nearest gage. As used in this paragraph, “average flow” means the 12-month rolling average of the average monthly flow.*
- d. Any discharge from a point source into Las Vegas Wash must not exceed a log mean of 200 per 100 ml. 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 100 ml.

[d. **The most significant beneficial uses.**]