

**PROPOSED REGULATION OF THE
STATE ENVIRONMENTAL COMMISSION
LCB File No. RXXX-08**

April 10, 2008

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

AUTHORITY: §§1-318, NRS 445A.425 and 445A.520.

A REGULATION relating to water controls; revising the water quality standards that apply to the bodies of water known as Muddy River and Bowman Reservoir; and providing other matters properly relating thereto.

SECTION 1. NAC 445A.174, NAC 445A.209, NAC 445A.210, and NAC 445A.211 are hereby amended to read as follows:

NAC 445A.174 Beneficial uses for Virgin River, Meadow Valley Wash and ~~part of~~ Muddy River at Wells Siding Diversion and Muddy River at Overton. (NRS 445A.425, 445A.520) The standards of water quality for the Virgin River, Muddy River below Glendale and Meadow Valley Wash are prescribed in NAC 445A.175, 445A.176, 445A.177, 445A.XXX, 445A.211 and 445A.212. The beneficial uses for these areas are:

1. Irrigation;
2. Watering of livestock;
3. Recreation not involving contact with the water;
4. Industrial supply;
5. Propagation of wildlife; ~~and~~
6. Propagation of aquatic life~~;~~ *and*
7. *Recreation involving contact with the water.*

(Added to NAC by Environmental Comm'n, 7-31-85, eff. 8-1-85)—(Substituted in revision for NAC 445.13439)

NAC 445A.209 Beneficial uses for Muddy River at Glendale Bridge. ([NRS 445A.425](#), [445A.520](#)) The standards for water quality for the Muddy River at Glendale Bridge are prescribed in [NAC 445A.210](#). The beneficial uses for this area are:

1. Irrigation;
2. Watering of livestock;
3. Recreation not involving contact with the water;
4. Industrial supply;
5. Municipal or domestic supply, or both;
6. Propagation of wildlife; ~~and~~
7. Propagation of aquatic life~~;~~**and**

8. Recreation involving contact with the water.

(Added to NAC by Environmental Comm'n, 7-31-85, eff. 8-1-85)—(Substituted in revision for NAC 445.1379)

NAC 445A.210 Muddy River at Glendale Bridge. ([NRS 445A.425](#), [445A.520](#))

STANDARDS OF WATER QUALITY
Muddy River

Control Point at Glendale Bridge. The limits of this table apply from the *river source to* Glendale Bridge, *except for the length of the river within the exterior borders of the Moapa Band of Paiutes Moapa Reservation.* ~~upstream to the river source.~~

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - [Maximum] <i>Source Springs to Warm Springs Bridge</i> <i>Warm Springs Bridge to Glendale Bridge</i>		[Nov. - Jun. : ≤21°C] [Jul. - Oct. : ≤32°C] <i>19 ≤ T ≤ 32</i> <i>15 ≤ T ≤ 30</i>	Aquatic life. ^b
ΔT ^a	ΔT = 0°C	ΔT ≤ 2°C	
pH Units	—	S.V. : 6.5 - 9.0 ΔpH : ±0.5 Max.	Propagation of wildlife, ^b aquatic life, ^b <i>recreation involving contact with the water</i> , recreation not involving contact with the water, irrigation, watering of livestock, municipal or domestic supply and industrial supply.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Total [Phosphates] <i>Phosphorous</i> (as P) - mg/l	—	A-Avg. : ≤0.1	Aquatic life, ^b <i>recreation involving contact with the water</i> , recreation not involving contact with the water, and municipal or domestic supply.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg. : ≤1.3 S.V. : ≤1.4	Nitrate S.V. : ≤10 Nitrite S.V. : ≤1.0	Municipal or domestic supply, ^b aquatic life, <i>recreation involving contact with the water</i> , recreation involving contact with the water, watering of livestock, propagation of wildlife and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	[f] <i>e</i>	Aquatic life. ^b
Dissolved Oxygen - mg/l	—	[S.V. : ≤5.0] <i>S.V. : ≥5.0</i>	Aquatic life, ^b <i>recreation involving contact with the water</i> , recreation not involving contact with the water, propagation of wildlife, watering of livestock, and municipal or domestic supply.
Turbidity - NTU	—	[e] <i>d</i>	Aquatic life ^b and municipal or domestic supply.
Color - PCU	—	[d] <i>S.V. : ≤ 75</i>	[Aquatic life^b and municipal or domestic supply.] <i>Municipal or domestic supply,^b and propagation of aquatic life.</i>
Total Dissolved Solids - mg/l	—	c	Municipal or domestic supply, ^b irrigation and watering of livestock.
Alkalinity (as CaCO ₃) - mg/l	—	Less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform - No./100ml	— —	A.G.M. : ≤1000 S.V. : ≤2000	Recreation not involving contact with the water, ^b municipal or domestic supply, ^b irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml [Annual Geometric Mean]	—	[≤630] <i>A.G.M. : ≤ 126</i> <i>S.V. : ≤ 410</i>	Recreation [not] involving contact with the water ^b <i>and recreation not involving contact with the water.</i>
<i>Fluoride (as total recoverable) – mg/l</i>	—	<i>S.V. : ≤ 2.6</i>	<i>Irrigation^b and watering of livestock</i>

- a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
 - b. The most restrictive beneficial use.
 - c. The salinity standard for the Colorado River System is specified in [NAC 445A.143](#).
- ~~[d.—Increase in color must not be more than 10 PCU above natural conditions.]~~
- ~~[e.] d.~~ Increase in turbidity must not be more than 10 NTU above natural conditions.
- ~~[f.] e.~~ The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 54, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 7-31-85, eff. 8-1-85; R099-02, 12-17-2002)

NAC 445A.211 Muddy River at Overton. ([NRS 445A.425](#), [445A.520](#))

STANDARDS OF WATER QUALITY
Muddy River

Control Point at Overton. The limits of this table apply from the *Wells Siding Diversion to* mouth of the river at Lake Mead. ~~to the Glendale Bridge.~~

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - [Maximum] ΔT^a	$\Delta T = 0^\circ\text{C}$	[Nov. - Jun. : $\leq 21^\circ\text{C}$] [Jul. - Oct. : $\leq 32^\circ\text{C}$] $T \leq 32$ $\Delta T \leq 2^\circ\text{C}$	Aquatic life. ^b
pH Units	—	S.V. : 6.5 - 9.0 ΔpH : ± 0.5 Max.	Propagation of wildlife, ^b aquatic life, ^b <i>recreation involving contact with the water</i> , recreation not involving contact with the water, irrigation, watering of livestock, and industrial supply.
Total [Phosphates] <i>Phosphorous</i> (as P) - mg/l	—	A-Avg. : ≤ 0.3	Aquatic life, ^b <i>recreation involving contact with the water</i> , and recreation not involving contact with the water.
Nitrogen Species (N) - mg/l	Total Nitrogen A-Avg. : ≤ 1.3 S.V. : ≤ 1.8	Nitrate S.V. : ≤ 90 Nitrite S.V. : ≤ 5.0	Aquatic life, ^b watering of livestock, propagation of wildlife, <i>recreation involving contact with the water</i> , and recreation not involving contact with the water.
Total Ammonia (as N) - mg/l	—	f	Aquatic life. ^b
Dissolved Oxygen - mg/l	—	S.V. : ≥ 5.0	Aquatic life, ^b <i>recreation involving contact with the water</i> , recreation not involving contact with the water, propagation of wildlife, and watering of livestock.
Turbidity - NTU	—	e	Aquatic life. ^b
Color - PCU	—	d	Aquatic life. ^b
Total Dissolved Solids - mg/l	—	c	Irrigation ^b and watering of livestock.
Alkalinity (as CaCO_3) - mg/l	—	less than 25% change from natural conditions	Aquatic life ^b and propagation of wildlife.
Fecal Coliform - No./100ml	A.G.M. : ≤ 500 S.V. : ≤ 1300	A.G.M. : ≤ 1000 S.V. : ≤ 2000	Recreation not involving contact with the water, ^b irrigation, propagation of wildlife and watering of livestock.
E coli - No./100ml [Annual Geometric Mean]	—	[≤ 630] $A.G.M. : \leq 126$ $S.V. : \leq 410$	Recreation [not] involving contact with the water ^b <i>and recreation not involving contact with the water.</i>
<i>Fluoride (as total recoverable) - mg/l</i>	—	$S.V. : \leq 2.6$	<i>Irrigation^b and watering of livestock.</i>
<i>Boron (as total recoverable) - mg/l</i>	—	$S.V. : \leq 2.0$	<i>Irrigation^b and propagation of wildlife.</i>

- a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.
- b. The most restrictive beneficial use.
- c. The salinity standard for the Colorado River System is specified in [NAC 445A.143](#).
- d. Increase in color must not be more than 10 PCU above natural conditions.
- e. Increase in turbidity must not be more than 10 NTU above natural conditions.
- f. The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).

[Environmental Comm'n, Water Pollution Control Reg. part § 4.2.5, Table 55, eff. 5-2-78; A 1-25-79; 8-28-79; 1-25-80; 12-3-80]—(NAC A 7-31-85, eff. 8-1-85; R099-02, 12-17-2002)

SECTION 2. A “new” water quality standards table (NAC 445A. XXX) for the Muddy River will be incorporated between NAC 445A.210 and NAC 445A.211 and will read as follows:

NAC 445A.XXX Muddy River at Wells Siding Diversion. (NRS 445A.425, 445A.520)

***STANDARDS OF WATER QUALITY
Muddy River***

Control Point at Wells Siding Diversion. The limits of this table apply from the Glendale Bridge to the Wells Siding Diversion.

<i>PARAMETER</i>	<i>REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY</i>	<i>WATER QUALITY STANDARDS FOR BENEFICIAL USES</i>	<i>BENEFICIAL USES</i>
<i>Temperature °C - ΔT^a</i>	<i>ΔT = 0 °C</i>	<i>15 ≤ T ≤ 30 ΔT ≤ 2 °C</i>	<i>Aquatic life.^b</i>
<i>pH Units</i>	—	<i>S.V. : 6.5 - 9.0 ΔpH : ±0.5 Max.</i>	<i>Propagation of wildlife,^b aquatic life,^b recreation involving contact with the water, recreation not involving contact with the water, irrigation, watering of livestock and industrial supply.</i>
<i>Total Phosphorous (as P) - mg/l</i>	—	<i>A-Avg. : ≤0.3</i>	<i>Aquatic life,^b recreation involving contact with the water, and recreation not involving contact with the water.</i>
<i>Nitrogen Species (N) - mg/l</i>		<i>Nitrate S.V. : ≤90 Nitrite S.V. : ≤5.0</i>	<i>Aquatic life,^b watering of livestock, propagation of wildlife, recreation involving contact with the water, and recreation not involving contact with the water.</i>
<i>Total Ammonia (as N) - mg/l</i>	—	<i>f</i>	<i>Aquatic life.^b</i>
<i>Dissolved Oxygen - mg/l</i>	—	<i>S.V. : ≥5.0</i>	<i>Aquatic life,^b recreation involving contact with the water, recreation not involving contact with the water, propagation of wildlife and watering of livestock.</i>
<i>Turbidity - NTU</i>	—	<i>e</i>	<i>Aquatic life.^b</i>
<i>Color – PCU</i>	—	<i>d</i>	<i>Aquatic life.^b</i>
<i>Total Dissolved Solids - mg/l</i>	—	<i>c</i>	<i>Irrigation^b and watering of livestock.</i>
<i>Alkalinity (as CaCO₃) - mg/l</i>	—	<i>less than 25% change from natural conditions</i>	<i>Aquatic life^b and propagation of wildlife.</i>
<i>Fecal Coliform - No./100ml</i>		<i>A.G.M. : ≤1000 S.V. : ≤2000</i>	<i>Recreation not involving contact with the water,^b irrigation, propagation of wildlife and watering of livestock.</i>
<i>E coli - No./100ml</i>	—	<i>A.G.M. : ≤126 S.V. : ≤410</i>	<i>Recreation involving contact with the water,^b and recreation not involving contact with the water.</i>
<i>Fluoride (as total recoverable) – mg/l</i>	—	<i>S.V. : ≤2.6</i>	<i>Irrigation^b and watering of livestock</i>

a. Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.

- b. *The most restrictive beneficial use.*
- c. *The salinity standard for the Colorado River System is specified in [NAC 445A.143](#).*
- d. *Increase in color must not be more than 10 PCU above natural conditions.*
- e. *Increase in turbidity must not be more than 10 NTU above natural conditions.*
- f. *The ambient water quality criteria for ammonia are specified in [NAC 445A.118](#).*

SECTION 3. A “new” water quality standards table (NAC 445A.YYY) for Bowman

Reservoir will be added to Chapter 445A of NAC and will read as follows:

NAC 445A.YYY Bowman Reservoir. ([NRS 445A.425](#), [445A.520](#))

**STANDARDS OF WATER QUALITY
Bowman Reservoir**

The limits of this table apply to the entire body of water known as Bowman Reservoir. Bowman Reservoir is located in Clark County.

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	BENEFICIAL USES
Temperature °C - ΔT^a	—	$T \leq 34$ $\Delta T \leq 3^\circ C$	Aquatic life. ^b
pH Units	—	S.V. : 6.5 - 9.0	Propagation of wildlife, ^b aquatic life, ^b recreation involving contact with the water, recreation not involving contact with the water, irrigation, watering of livestock, municipal or domestic supply and industrial supply.
Total Phosphorous (as P) - mg/l	—	S.V. : ≤ 0.33	Aquatic life, ^b recreation involving contact with the water, recreation not involving contact with the water, and municipal or domestic supply.
Dissolved Oxygen - mg/l	—	S.V. : ≥ 5.0	Aquatic life, ^b recreation involving contact with the water, recreation not involving contact with the water, propagation of wildlife, watering of livestock, and municipal or domestic supply.
Total Dissolved Solids - mg/l	—	c	Municipal or domestic supply, ^b irrigation and watering of livestock.
Fecal Coliform - No./100ml	—	d	Recreation involving contact with the water, ^b recreation not involving contact with the water, municipal or domestic supply, ^b irrigation, propagation of wildlife and watering of livestock.
Fluoride (as total recoverable) – mg/l	—	S.V. : ≤ 2.6	Irrigation ^b and watering of livestock

- a. *Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.*
- b. *The most restrictive beneficial use.*
- c. *The salinity standard for the Colorado River System is specified in [NAC 445A.143](#).*
- d. *The more stringent of the following apply:*

- ¹ *The fecal coliform concentration must not exceed a geometric mean of 1,000 per 100 milliliters, nor may more than 20 percent of total samples exceed 2,400 per 100 milliliters.*
- ² *The fecal coliform concentration must not exceed the 95th percentile of the annual geometric mean or the 95th percentile of n, where n equals a certain number of single value samples as determined by the Division.*