

**PROPOSED REGULATION OF THE
STATE ENVIRONMENTAL COMMISSION**

LCB File No. R101-14

October 23, 2015

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

AUTHORITY: §§1-3, NRS 445A.425 and 445A.520.

A REGULATION relating to water quality; revising certain water quality standards relating to Lahontan Reservoir; and providing other matters properly relating thereto.

Legislative Counsel’s Digest:

The State Environmental Commission is required to establish water quality standards to protect and ensure the continued beneficial use of each stream segment and other body of surface water in this State. (NRS 445A.520) This regulation revises certain water quality standards relating to Lahontan Reservoir.

Section 1. NAC 445A.1792 is hereby amended to read as follows:

445A.1792 The designated beneficial uses for select bodies of water within the Carson

Region are prescribed in this section:

Water Body Name	Segment Description	Beneficial Uses											Aquatic Life Species of Concern	Water Quality Standard NAC Reference	
		Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh			
Carson River, West Fork at the state line	At the California-Nevada state line.	X	X	X	X	X	X	X	X	X				Rainbow trout and brown trout	NAC 445A.1796

Water Body Name	Segment Description	Beneficial Uses											Aquatic Life Species of Concern	Water Quality Standard NAC Reference		
		Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh				
Bryant Creek near the state line	From the California-Nevada state line to its confluence with the East Fork of the Carson River.	X	X	X	X	X	X	X	X						Rainbow trout and brown trout	NAC 445A.1798
Carson River, East Fork at the state line	At the California-Nevada state line.	X	X	X	X	X	X	X	X						Rainbow trout and brown trout	NAC 445A.1802
Carson River, East Fork at U.S. Highway 395 south of Gardnerville	From the California-Nevada state line to the Riverview Mobile Home Park at U.S. Highway 395 south of Gardnerville, except for the length of the river within the exterior borders of the Washoe Indian Reservation.	X	X	X	X	X	X	X	X						Rainbow trout and brown trout	NAC 445A.1804
Carson River, East Fork at Muller Lane	From the Riverview Mobile Home Park at U.S. Highway 395 to Muller Lane, except for the length of the river within the exterior borders of the Washoe Indian Reservation.	X	X	X	X	X	X	X	X						Rainbow trout and brown trout	NAC 445A.1806

Water Body Name	Segment Description	Beneficial Uses											Aquatic Life Species of Concern	Water Quality Standard NAC Reference		
		Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh				
Carson River at Genoa Lane	The East Fork of the Carson River from Muller Lane to the West Fork, the West Fork of the Carson River from the California-Nevada state line to the East Fork, and the main stem of the Carson River from the confluence of the East and West Forks to Genoa Lane.	X	X	X	X	X	X	X	X						Catfish, rainbow trout and brown trout	NAC 445A.1808
Carson River at Cradlebaugh Bridge	From Genoa Lane to U.S. Highway 395 at Cradlebaugh Bridge, except for the length of the river within the exterior borders of the Washoe Indian Reservation.	X	X	X	X	X	X	X	X						Catfish, rainbow trout and brown trout	NAC 445A.1812
Carson River at the Mexican Ditch Gage	From U.S. Highway 395 at Cradlebaugh Bridge to the Mexican Ditch Gage.	X	X	X	X	X	X	X	X						Rainbow trout and brown trout	NAC 445A.1814
Carson River near New Empire	From the Mexican Ditch Gage to New Empire.	X	X	X	X	X	X	X	X						Smallmouth bass, rainbow trout and brown trout	NAC 445A.1816
Carson River at Dayton Bridge	From New Empire to the Dayton Bridge.	X	X	X	X	X	X	X	X						Walleye, channel catfish and white bass	NAC 445A.1818

Water Body Name	Segment Description	Beneficial Uses											Aquatic Life Species of Concern	Water Quality Standard NAC Reference			
		Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh					
Carson River at {Weeks} <i>Lahontan Reservoir</i>	From the Dayton Bridge to {the U.S. Highway 95 Alt Bridge at Weeks.} <i>Lahontan Reservoir.</i>	X	X	X	X	X	X	X	X							Walleye, channel catfish and white bass	NAC 445A.1822
{Carson River at Lahontan Dam} <i>Lahontan Reservoir</i>	{From the U.S. Highway 95 Alt Bridge at Weeks to Lahontan Dam.} <i>The entire reservoir.</i>	X	X	X	X	X	X	X	X							Walleye, channel catfish and white bass	NAC 445A.1824
Lower Carson River	From Lahontan Reservoir to the Carson Sink (the natural channel).	X	X	X	X	X	X	X	X								NAC 445A.1826
Daggett Creek	From its origin to the Carson River.	X	X	X	X	X	X		X								NAC 445A.1828
Genoa Creek	From its origin to the first diversion box at the mouth of the canyon, near the east line of section 9, T. 13 N., R. 19 E., M.D.B. & M.	X	X	X	X	X	X		X								NAC 445A.1832
Sierra Canyon Creek	From its origin to the first diversion structure at the mouth of the canyon, near the east line of section 4, T. 13 N., R. 19 E., M.D.B. & M.	X	X	X	X	X	X		X								NAC 445A.1834

Water Body Name	Segment Description	Beneficial Uses										Aquatic Life Species of Concern	Water Quality Standard NAC Reference			
		Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance			Marsh		
Clear Creek at the gaging station	From its origin to gaging station number 10-3105, located in the NE 1/4 of the NW 1/4 of section 1, T. 14 N., R. 19 E., M.D.B. & M., except for the length of the creek within the exterior borders of the Washoe Indian Reservation.	X	X	X	X	X	X		X							NAC 445A.1836
Clear Creek at the Carson River	From gaging station number 10-3105, located in the NE 1/4 of the NW 1/4 of section 1, T. 14 N., R. 19 E., M.D.B. & M., to the Carson River, except for the length of the creek within the exterior borders of the Washoe Indian Reservation.	X	X	X	X	X	X	X	X				Trout		NAC 445A.1838	
Kings Canyon	From its origin to the point of diversion of the Carson City Water Department, near the east line of section 23, T. 15 N., R. 19 E., M.D.B. & M.	X	X	X	X	X	X	X							NAC 445A.1842	

Water Body Name	Segment Description	Beneficial Uses											Aquatic Life Species of Concern	Water Quality Standard NAC Reference		
		Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh				
Ash Canyon	From its origin to the first point of diversion of the Carson City Water Department, near the west line of section 12, T. 15 N., R. 19 E., M.D.B. & M.	X	X	X	X	X	X		X							NAC 445A.1844
V-Line Canal	From the Carson diversion dam to its division into the S and L Canals.	X	X	X	X	X	X	X	X							NAC 445A.1846
Rattlesnake Reservoir	The entire reservoir; also known as S-Line Reservoir.	X	X	X	X	X	X	X	X							NAC 445A.1848
Indian Lakes	All the lakes, including Upper Lake, Likes Lake, Papoose Lake, Big Indian Lake, Little Cottonwood Lake, Big Cottonwood Lake and East Lake.	X	X	X	X	X	X	X	X							NAC 445A.1852
Diagonal Drain	Its entire length.	X	X	X	X	X	X	X	X							NAC 445A.1854
South Carson Lake	The entire lake; also known as Government Pasture and the Greenhead Gun Club.	X	X	X	X	X	X	X	X							NAC 445A.1856
Harmon Reservoir	The entire reservoir.	X	X	X	X	X	X	X	X							NAC 445A.1858
Stillwater Marsh east of Westside Road	East of Westside Road and north of the community of Stillwater.	X	X	X	X	X	X	X	X							NAC 445A.1862

Water Body Name	Segment Description	Beneficial Uses											Aquatic Life Species of Concern	Water Quality Standard NAC Reference			
		Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh					
Stillwater Marsh west of Westside Road	West of Westside Road and south of the community of Stillwater.	X	X	X		X		X	X								NAC 445A.1864
Irrigation	Irrigation																
Livestock	Watering of livestock																
Contact	Recreation involving contact with the water																
Noncontact	Recreation not involving contact with the water																
Industrial	Industrial supply																
Municipal	Municipal or domestic supply, or both																
Wildlife	Propagation of wildlife																
Aquatic	Propagation of aquatic life																
Aesthetic	Waters of extraordinary ecological or aesthetic value																
Enhance	Enhancement of water quality																
Marsh	Maintenance of a freshwater marsh[

Sec. 2. NAC 445A.1822 is hereby amended to read as follows:

445A.1822 The limits of this table apply to the body of water known as the Carson River from the Dayton Bridge to ~~the U.S. Highway 95 Alt Bridge at Weeks.~~ *Lahontan Reservoir*. This segment of the Carson River is located in Lyon County.

STANDARDS OF WATER QUALITY

Carson River at ~~Weeks~~ *Lahontan Reservoir*

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	Beneficial Use ^a													
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh			
Beneficial Uses			X	X	X	X	X	X	X	X	X					
Aquatic Life Species of Concern			Walleye, channel catfish and white bass.													
Temperature - °C		S.V. Nov-Mar ≤ 11 S.V. Apr-Jun ≤ 24 S.V. Jul-Oct ≤ 28														
ΔT ^b - °C	ΔT = 0	ΔT ≤ 2														
pH - SU	S.V. 7.5 - 8.5	S.V. 6.5 - 9.0 ΔpH ± 0.5	X	X	X	*				X	X	*				
Dissolved Oxygen - mg/l		S.V. ≥ 5.0	X		*	X	X	X		X						
Total [Phosphates] <i>Phosphorus</i> (as P) - mg/l		A-Avg. ≤ 0.1			*	*	X	X								
Nitrogen Species (as N) - mg/l	Total Nitrogen A-Avg. ≤ 0.6 S.V. ≤ 1.1	Nitrate S.V. ≤ 10 Nitrite S.V. ≤ 1.0	X		*	X	X	*		X						
Total Ammonia (as N) - mg/l		^c			*											
Suspended Solids - mg/l		S.V. ≤ 80			*											
Turbidity - NTU	A-Avg. ≤ 25	S.V. ≤ 50			*			X								
Color - PCU	^d	S.V. ≤ 75							*							
Total Dissolved Solids - mg/l	A-Avg. ≤ 250 S.V. ≤ 380	A-Avg. ≤ 500	X	X					*							
Chloride - mg/l	A-Avg. ≤ 10 S.V. ≤ 18	S.V. ≤ 250	X	X					*		X					

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	Beneficial Use ^a												
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh		
Sulfate - mg/l	A-Avg. ≤ 100 S.V. ≤ 140	S.V. ≤ 250							*						
Sodium - SAR	A-Avg. ≤ 2	A-Avg. ≤ 8		*					X						
Alkalinity (as CaCO ₃) - mg/l		< 25% change from natural conditions			*						X				
E. coli - No./100 ml		A.G.M. ≤ 126 S.V. ≤ 410			*			X							
Fecal Coliform - No./100 ml	A.G.M. ≤ 90 S.V. ≤ 240	S.V. ≤ 1,000	X	*				X	X		X				

* = The most restrictive beneficial use.

X = Beneficial use.

^a Refer to NAC 445A.122 and 445A.1792 for beneficial use terminology.

^b 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.

^c The ambient water quality criteria for ammonia are specified in NAC 445A.118.

^d Increase in color must not be more than 10 PCU above natural conditions.

Sec. 3. NAC 445A.1824 is hereby amended to read as follows:

445A.1824 The limits of this table apply to the *entire* body of water known as ~~the Carson River from the U.S. Highway 95 Alt Bridge at Weeks to Lahontan Dam. This segment of the Carson River~~ *Lahontan Reservoir. Lahontan Reservoir* is located in Churchill and Lyon Counties.

STANDARDS OF WATER QUALITY

[Carson River at Lahontan Dam] Lahontan Reservoir

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	Beneficial Use ^a													
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh			
Beneficial Uses			X	X	X	X	X	X	X	X	X					
Aquatic Life Species of Concern			Walleye, channel catfish and white bass.													
Temperature - °C ΔT^b - °C	 $\Delta T = 0$	S.V. Nov-Mar ≤ 11 S.V. Apr-Jun ≤ 24 S.V. Jul-Oct ≤ 28 $\Delta T \leq 2$					X									
pH - SU		S.V. 6.5 - 9.0 $pH \pm 0.5$	X	X	X	*	*		X	X	*					
Dissolved Oxygen - mg/l		S.V. $\geq 5.0^{cc}$	X		*	X	X	X			X					
Total [Phosphates] <i>Phosphorus</i> (as P) - mg/l		[S.V. ≤ 0.06] <i>Avg. Jun-Sep $\leq 0.140.09^{ed}$</i>			*	*	X	X								
Nitrogen Species (as N) - mg/l	Total Nitrogen A-Avg. ≤ 1.3 S.V. ≤ 1.7	Nitrate S.V. ≤ 10 Nitrite S.V. ≤ 1.0	X		*	X	X	*			X					
Total Ammonia (as N) - mg/l		[$\leq 4^e$]			*											
<i>Chlorophyll a</i> - $\mu g/l$		<i>Avg. Jun-Sep $\leq 15^e$</i>			*	*	X	X								
Suspended Solids - mg/l		S.V. ≤ 25			*											
Turbidity - NTU	A-Avg. ≤ 15 S.V. ≤ 27	S.V. ≤ 50			*				X							
Color - PCU	[≤ 7]	S.V. ≤ 75							*							

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY STANDARDS FOR BENEFICIAL USES	Beneficial Use ^a													
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh			
Total Dissolved Solids - mg/l	A-Avg. ≤ 175 S.V. ≤ 225	A-Avg. ≤ 500	X	X					*							
Chloride - mg/l	A-Avg. ≤ 9 S.V. ≤ 15	[S.V. ≤ 250] <i>1-hour Avg. ≤ 230^b</i> <i>96-hour Avg. ≤ 860^c</i>	X	[X]	*					[*]	X					
Sulfate - mg/l	A-Avg. ≤ 35 S.V. ≤ 50	S.V. ≤ 250							*							
Sodium - SAR	A-Avg. ≤ 2	A-Avg. ≤ 8							X							
Alkalinity (as CaCO ₃) - mg/l		[< 25% change from natural conditions] S.V. ≥ 20			*						X					
E. coli - No./100 ml		A.G.M. ≤ 126 S.V. ≤ 235					*	X								
Fecal Coliform - No./100 ml	A.G.M. ≤ 25 S.V. ≤ 75	S.V. ≤ 1,000	X	*				X	X		X					

* = The most restrictive beneficial use.

X = Beneficial use.

^a Refer to NAC 445A.122 and 445A.1792 for beneficial use terminology.

^b 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.

^c *June-September average for a basin within the upper meter of the water column. These nutrient criteria are considered attained if:*

1— The chlorophyll a criterion is met regardless of the level of total phosphorus or total nitrogen; or

~~2~~ ~~If chlorophyll a data are not available, both the total phosphorus and total nitrogen criterion is met.~~ *When reservoir is stratified, the dissolved oxygen criterion applies only to epilimnion.*

^d *June-September average for a basin within the upper meter of the water column.*

^(e) ^d ^e The ambient water quality criteria for ammonia are specified in NAC 445A.118.

~~^e When reservoir is stratified, the dissolved oxygen criterion applies only to epilimnion.~~

^(f) ^f Increase in color must not be more than 10 PCU above natural conditions.

^g *One-hour and 96-hour average concentration limits may be exceeded only once every 3 years.*

Revised draft