Nevada Division of Environmental Protection

Workshop for proposed regulation R146-24
Colorado River Salinity Standards

March 10, 2026, 1:30pm

Presented by

Seth Alm, Standards, Assessment, and Monitoring Branch
Bureau of Water Quality Planning

Nevada Department of CONSERVATION & NATURAL RESOURCES

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

R146-24: Colorado River Salinity

This meeting is being held in-person and virtually

- Meeting is being recorded and transcribed
- Questions or comments? Please raise your hand, or use the “chat” function in Teams

Slides are available on the NDEP website

- https://ndep.nv.gov/water/rivers-streams-lakes/water-quality-standards/

Written comments accepted until

March 23, 2026

Outline

Clean Water Act Overview

Background on Colorado River Salinity

Proposed Regulation

Additional Changes in the Proposed Regulation

Comments/Discussion

Meeting Adjourned

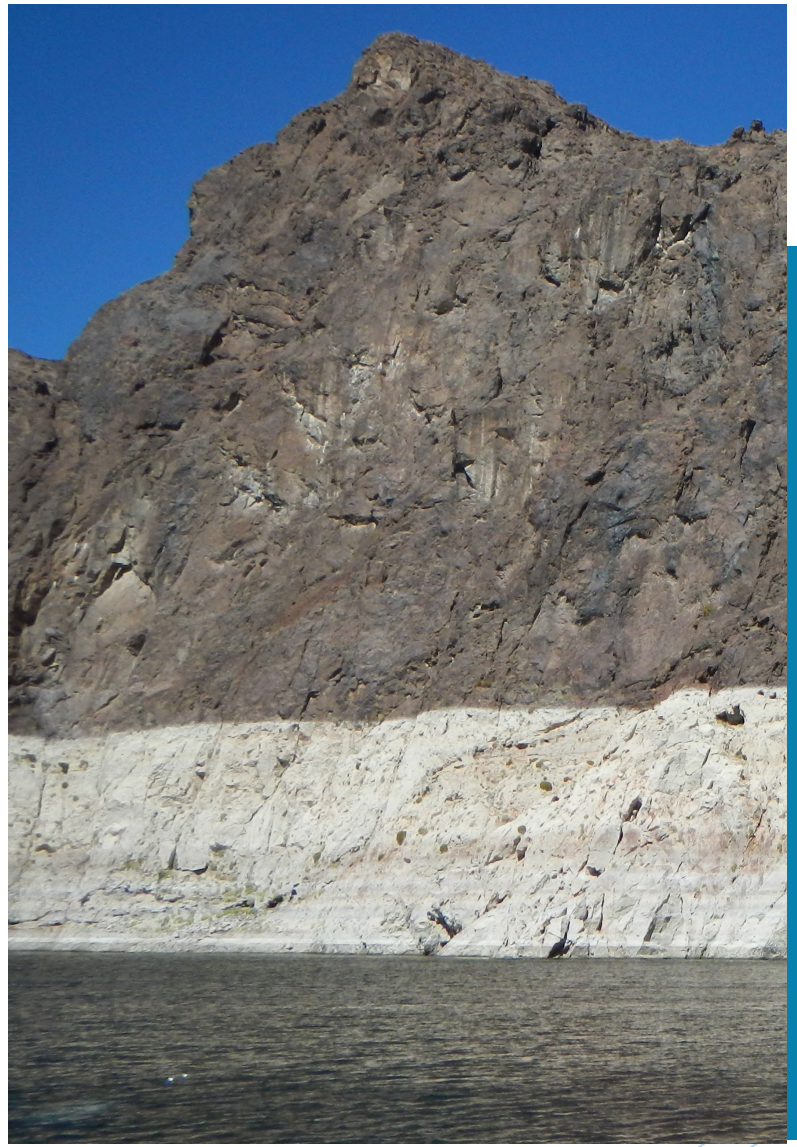
Background on Colorado River Salinity Control Forum

- The Colorado River is a vital water source for communities and agriculture across the West.
- As it flows downstream, it accumulates salts, creating rising salinity problems.
- High salinity harms water quality, ecosystems, and the economy.
- Concerns in the 1970s led to a Federal–state program to reduce salt levels.
- This long-running partnership has significantly lowered salinity and protected river use.

https://www.coloradoriversalinity.org

Background on Colorado River Salinity Controls

- The Colorado River Basin States came together in 1973 and organized the Colorado River Basin Salinity Control Forum.
- In 1974, in coordination with the Department of the Interior and the U.S. State Department, the Forum worked with Congress in the passage of the Colorado River Basin Salinity Control Act.
- Currently, salinity controls for the Colorado River are found in NAC 445A.1233.



Roles and Oversight

EPA - Colorado River Salinity Control Forum - NDEP

- The Colorado River Salinity Control Forum reviews the salinity criteria values every 3 years.
- The State of Nevada is required to collaborate with the other Colorado River Basin states and the Federal government to implement the salinity controls.
- Surface water quality standards serve as the basis for surface water discharge permit limitations.

Overview of Proposed Changes

R146-24: Colorado River Salinity Standards

- Adopts the "*2023 Review, Water Quality Standards for Salinity, Colorado River System*".
- Amends standards tables for the Colorado River system to incorporate salinity standards and adjusts footnotes for clarity on applicability.
- Amends and moves language regarding Colorado River Salinity to NAC 445A.2144 - Colorado Region
- **No changes** to existing salinity standards, including beneficial uses or criteria are proposed.

Overview of Proposed Changes

R146-24: Additional Proposed Changes

- Removes a disused definition of "*Flow weighted annual average concentration*" in NAC 445A.0865.
- Renames select designated waters to reflect current U.S. Board on Geographic Names naming conventions.
- Amends designated waters tables to reflect the removal of Schroeder Reservoir.
- Typographical fixes for clarity and consistency

Salinity Standards

R146-24

- Relocates information currently found in NAC445A.1233 and repeals this section.

STANDARDS OF WATER QUALITY
Colorado River: Lake Mohave

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY CRITERIA TO PROTECT BENEFICIAL USES	Beneficial Uses[a]										
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh
~~[Total Dissolved Solids]~~ *Salinity* - mg/L		*Flow weighted A-Avg. concentration ≤ 747*[d]						*					

Affected designated waters:

- Colorado River below Davis Dam (NAC 445A.2146)
- Colorado River: Lake Mohave (NAC 445A.2147)
- Colorado River below Hoover Dam (NAC 445A.2148)
- Lake Mead NAC (445A.2152)

Footnotes and Terminology Updates

R146-24

- Footnote defines flow weighted annual average concentration.
- Removes footnotes to Colorado Region designated waters referencing NAC 445A.1233.

d ~~[The salinity standards for the Colorado River system are specified in NAC 445A.1233.]~~ *As used for this parameter, flow weighted annual average concentration means the total annual salt load divided by the total annual streamflow.*

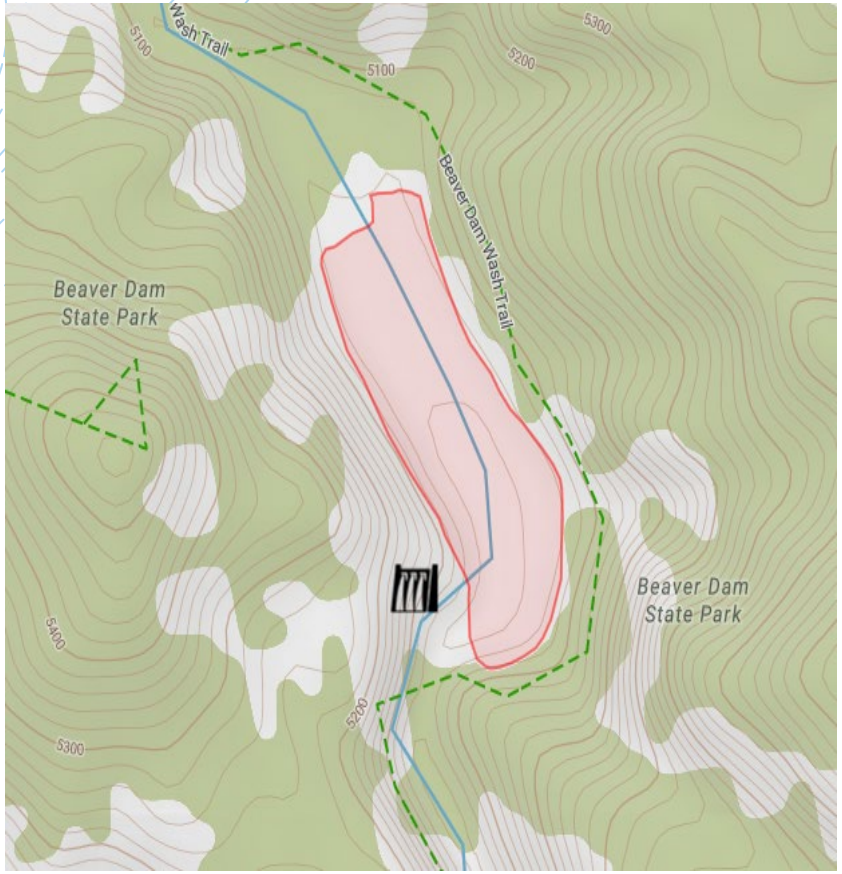
Waterbody Name Updates

R146-24

- Updates several designated water names to reflect current official naming conventions to ensure consistency with the U.S. Board on Geographic Names.
    - Granite Mountain Reservoir in the Black Rock Region (NAC 445A.1288)
    - Rock Creek above and below its confluence with Willow Creek in the Humbolt Region (NAC 445A.1518 and 1522)
    - Mud Creek in the Walker Region (NAC 445A.1928)

~~[Squaw Creek]~~ *Granite Mountain* Reservoir	The entire reservoir.	X	X	X	X	X	X	X	X				Trout	NAC 445A.1288

Schroeder Reservoir



- Removes Schroeder Reservoir from NAC 445A.2182 & updates NAC 445A.2178 (Beaver Dam Wash) to reflect reservoir removal.
- As this water no longer exists, R146-24 repeals the water quality standards entirely.
- These updates ensure Nevada's regulations reflect current hydrologic conditions.

Beaver Dam Wash

NAC445A.2178

- Existing regulations reference Beaver Dam Wash above Schroeder Reservoir, making the designated water description outdated.
- R146-24 updates the description of Beaver Dam Wash to reflect this removal.
- This change ensures the designated water description accurately reflects the current condition of the waterbody.

Benefits of the Proposed Regulation

- Removes outdated and obsolete regulatory language.
- Aligns standards with current hydrology and conditions on the ground.
- Adopts the most current review of water quality standards for salinity for the Colorado River system.
- Improves clarity and consistency across designated water tables.
- Improves clarity on applicability of regulations.

Next steps for R146-24

Comments received during this workshop, and written comments received by ***March 23*** will be considered before adoption.

State Environmental Commission Hearing is scheduled ***April 30, 2026***, will provide additional opportunity for public comment on these proposed changes.

Supporting Information

Additional information available on the NDEP website

NDEP BWQP:

https://ndep.nv.gov/water/rivers-streams-lakes

R146-24RP2 Regulation
R146-24 Fact Sheet
R146-24 Public Notice

Colorado River Salinity Control Forum:

https://www.coloradoriversalinity.org

Thank You

Workshop comment deadline
March 23, 2026

Provide written comments to
Seth Alm
Standards, Assessment, and Monitoring Branch

Phone: 775-687-9457
Email: salm@ndep.nv.gov

Questions or Comments?

R146-24RP2 Regulation
R146-24 Fact Sheet
R146-24 Public Notice

NDEP Current and Past Actions
Nevada Water Pollution Control Regulations
NAC 445A.1233 Cooperation regarding Colorado River; salinity standards.
NAC 445A.2182 Colorado Region: Schroeder Reservoir

Colorado River Basin Salinity Control Forum

Language replacing NAC 445A.1233

Section 1. Chapter 445A of NAC is hereby amended by adding thereto a new section to read as follows:

The Commission hereby adopts by reference the "2023 Review, Water Quality Standards for Salinity, Colorado River System," adopted by the Colorado River Basin Salinity Control Forum as the salinity standards for the portions of the Colorado River system in this State. The publication is available, free of charge, from the Division or at the Internet address https://www.coloradoriversalinity.org.

Language from NAC 445A.1233 relocated to NAC 445A.2144 - Colorado Region

Sec. 10. NAC 445A.2144 is hereby amended to read as follows:

445A.2144 The standards for water quality for select bodies of water within the Colorado Region are prescribed in NAC 445A.2144 to 445A.2214, inclusive ~~.~~ ***, and section 1 of this regulation.***

Revised Standards Table

STANDARDS OF WATER QUALITY

Colorado River below Hoover Dam

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY CRITERIA TO PROTECT BENEFICIAL USES	Beneficial Uses[a]										
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh
Beneficial Uses			X	X	X	X	X	X	X	X			
Aquatic Life Species of Concern			Adult cold-water fishery.										
Temperature - °C ΔT^b - °C	$\Delta T = 0$	S.V. $\leq$ 24 $\Delta T \leq 2$			*								
pH - SU		S.V. 6.5 - 9.0 $\Delta pH \pm 0.5$			*								
Dissolved Oxygen - mg/L		S.V. $\geq$ 5.0			*								
Total Phosphorus (as P) - mg/L	A-Avg. $\leq$ 0.02 S.V. $\leq$ 0.033	A-Avg. $\leq$ 0.05			*	*							
Total Nitrogen (as N) - mg/L	A-Avg. $\leq$ 1.0 S.V. $\leq$ 1.5				*	*							
Nitrate (as N) - mg/L		S.V. $\leq$ 10						*					
Nitrite (as N) - mg/L		S.V. $\leq$ 0.06			*								
Total Ammonia (as N) - mg/L		[c]			*								
Total Suspended Solids - mg/L		S.V. $\leq$ 25			*								
Chloride - mg/L		S.V. $\leq$ 400~~[d]~~						*					
Sulfate - mg/L		S.V. $\leq$ 500~~[d]~~						*					
Turbidity - NTU		S.V. $\leq$ 10			*								
Color - PCU		S.V. $\leq$ 75						*					
~~[Total Dissolved Solids]~~ ***Salinity*** - mg/L		***Flow weighted A-Avg. concentration $\leq$ 747***[d]						*					
Alkalinity (as $CaCO_3$) - mg/L		S.V. $\geq$ 20			*								
E. coli - cfu/100 mL[e]		G.M. $\leq$ 126 S.V. $\leq$ 410				*							
Fecal Coliform - No./100 mL	A.G.M. $\leq$ 50 S.V. $\leq$ 100	S.V. $\leq$ 1,000		*									
Toxic Materials		[f]											

* = The most restrictive beneficial use.
X = Beneficial use.

[a] Refer to NAC 445A.122 and 445A.2142 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 water quality criteria for ammonia are specified in NAC 445A.118.

[d] ~~[The salinity standards for the Colorado River system are specified in NAC 445A.1233.]~~ ***As used for this parameter, flow weighted annual average concentration means the total annual salt load divided by the total annual streamflow.***

[e] The geometric mean must not be exceeded in any 30-day period. The single value must not be exceeded in more than 10 percent of the samples collected within any 30-day period.

[f] The water quality criteria for toxic materials are specified in NAC 445A.1236.

Example of Typographical edits and removal of footnote referencing NAC 445A.1233

Muddy River at the Glendale Bridge

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY CRITERIA TO PROTECT BENEFICIAL USES	Beneficial Uses[a]										
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh
Beneficial Uses			X	X	X	X	X	X	X	X			
Aquatic Life Species of Concern													
Temperature °C - Source Springs to Warm Springs Bridge		19≤ ~~[T]~~ *S.V.* ≤32			*								
Warm Springs Bridge to Glendale Bridge		15≤ ~~[T]~~ *S.V.* ≤30											
ΔT[b]	ΔT = 0 ~~[°C]~~	ΔT ≤2 ~~[°C]~~											
pH - SU		S.V. 6.5 - 9.0 ΔpH ± 0.5 Max.			*								
Dissolved Oxygen - mg/L		S.V. ≥ 5.0			*								
Total Phosphorus (as P) - mg/L		A-Avg. ≤ 0.1			*	*							
Total Nitrogen (as N) - mg/L	A-Avg. ≤ 1.3 S.V. ≤ 1.4				*								
Nitrate (as N) - mg/L		S.V. ≤ 10						*					
Nitrite (as N) - mg/L		S.V. ≤ 1.0						*					
Total Ammonia (as N) - mg/L		[c]			*								
Turbidity - NTU		S.V. ≤ 50			*								
Color - PCU		S.V. ≤ 75						*					
~~[Total Dissolved Solids - mg/L~~		~~d~~						~~*]~~					
Alkalinity (as $CaCO_3$) - mg/L		S.V. ≥ 20			*								
E. coli - cfu/100 mL ~~[e]~~ [d]		G.M. ≤ 126 S.V. ≤ 410				*							
Fecal Coliform - No./100 mL		S.V. ≤ 1,000		*									
Fluoride (as total recoverable) - mg/L		S.V. ≤ 2.6		*									
Toxic Materials		~~[f]~~ [e]											

* = The most restrictive beneficial use.
X = Beneficial use.

[a] Refer to NAC 445A.122 and 445A.2142 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 water quality criteria for ammonia are specified in NAC 445A.118.
[d] ~~[The salinity standards for the Colorado River system are specified in NAC 445A.1233.~~
~~e]~~ The geometric mean must not be exceeded in any 30-day period. The single value must not be exceeded in more than 10 percent of the samples collected within any 30-day period.
~~f]~~ [e] The water quality criteria for toxic materials are specified in NAC 445A.1236.