APPROVED REGULATION OF THE

STATE ENVIRONMENTAL COMMISSION

LCB File No. R149-24

Filed October 29, 2025

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

AUTHORITY: § 1, NRS 445A.425 and 445A.520, as amended by section 20 of Assembly Bill No. 104, chapter 226, Statutes of Nevada 2025, at page 1407.

A REGULATION relating to water quality standards; revising the water quality standards for certain toxins that are applicable to certain designated waters in this State; and providing other matters properly relating thereto.

Legislative Counsel's Digest:

Subject to certain exceptions, existing law requires the State Environmental Commission to adopt regulations establishing water quality standards at a level designed to protect and ensure a continuation of the designated beneficial use or uses which the Commission has determined to be applicable to each stream segment or other body of surface water in the State. Subject to the same exceptions, the Commission is further required to base its water quality standards on water quality criteria which: (1) numerically or descriptively define the conditions necessary to maintain the designated beneficial use or uses of the water; and (2) provide for recreation in and on the water if these objectives are reasonably attainable. (NRS 445A.520, as amended by section 20 of Assembly Bill No. 104, chapter 226, Statutes of Nevada 2025, at page 1407)

Existing regulations set forth the standards for toxic materials that are applicable to certain designated waters in this State. (NAC 445A.1236) This regulation makes various changes to the standards for toxic materials.

Section 1 of this regulation sets forth certain water quality standards for cylindrospermopsin and microcystins relating to the designated beneficial use of recreation involving contact with the water. These standards are based on certain publications of the United States Environmental Protection Agency, as cited in **section 1**.

Section 1 further makes technical corrections to: (1) add a footnote to the water quality standards for cyanide; and (2) the spelling of the term "Heptachlor Epoxide."

Section 1. NAC 445A.1236 is hereby amended to read as follows:

445A.1236 1. Except for waters which have site-specific standards for toxic materials or as otherwise provided in this section, the standards for toxic materials prescribed in subsection 2 are applicable to the waters specified in NAC 445A.123 to 445A.2234, inclusive. The following criteria apply to this section:

(a) If the standards are exceeded at a site and are not economically controllable, the Commission will review and may adjust the standards for the site.

(b) If a standard does not exist for each designated beneficial use, a person who plans to discharge waste must demonstrate that no adverse effect will occur to a designated beneficial use. If the discharge of a substance will lower the quality of the water, a person who plans to discharge waste must meet the requirements of NRS 445A.565.

(c) If a criterion is less than the reporting limit of a method that is acceptable to the Division, laboratory results which show that the substance was not detected at a quantifiable level shall be deemed to show compliance with the standard unless other information indicates that the substance may be present.

2. The standards for toxic materials are:

Chemical	Municipal or Domestic Supply (µg/L)		Aquatic Life[1,2] (µg/L)	Irrigation (µg/L)	Watering of Livestock (µg/L)	***Recreation Involving Contact With the Water*** ***(µg/L)***
INORGANIC CHEMICALS[3]						
Antimony	146[a]	-		-	-	-
Arsenic	50[b]	-		100[c]	200[d]	-
1-hour average	-	340[f,(4)]		-	-	-
96-hour average	-	150[f,(4)]		-	-	-
Barium	2,000[b]	-		-	-	-
Beryllium	4[i]	-		100[c]	-	-

Chemical	Municipal or Domestic Supply (µg/L)	Aquatic Life[1,2] (µg/L)	Irrigation (µg/L)	Watering of Livestock (µg/L)	*Recreation Involving Contact With the Water (µg/L)*
Boron	-	-	750[a]	5,000[d]	-
Cadmium	5[b]	-	10[d]	50[d]	-
1-hour average	-	(1.136672-{ln(hardness)(0.041838)})* e^(0.9789{ln(hardness)} - 3.866) h,(4)	-	-	-
96-hour average	-	(1.101672-{ln(hardness)(0.041838)})* e^(0.7977{ln(hardness)} - 3.909) h,(4)	-	-	-
Chromium (total)	100[b]	-	100[d]	1,000[d]	-
Chromium (VI)	-	-	-	-	-
1-hour average	-	16[f,(4)]	-	-	-
96-hour average	-	11[f,(4)]	-	-	-
Chromium (III)	-	-	-	-	-
1-hour average	-	(0.316) * e^(0.8190{ln(hardness)} + 3.7256) f,(4)	-	-	-
96-hour average	-	(0.860) * e^(0.8190{ln(hardness)} + 0.6848) f,(4)	-	-	-
Copper	-	-	200[d]	500[d]	-
1-hour average	-	(0.960) * e^(0.9422{ln(hardness)} - 1.700) f,(4)	-	-	-
96-hour average	-	(0.960) * e^(0.8545{ln(hardness)} - 1.702) f,(4)	-	-	-
Cyanide	200[a,(5)]	-	-	-	-
1-hour average	-	22[f,(5)]	-	-	-
96-hour average	-	5.2[f,(5)]	-	-	-
Fluoride	-	-	1,000[d]	2,000[d]	-
Iron	-	-	5,000[d]	-	-
96-hour average	-	1,000[f]	-	-	-
Lead	50[a,b]	-	5,000[d]	100[d]	-
1-hour average	-	(1.46203-{ln(hardness)(0.145712)})* e^(1.273{ln(hardness)} - 1.460) f,(4)	-	-	-
96-hour average	-	(1.46203-{ln(hardness)(0.145712)})* e^(1.273{ln(hardness)} - 4.705) f,(4)	-	-	-
Manganese	-	-	200[d]	-	-
Mercury	2[b]	-	-	10[d]	-
1-hour average	-	1.4[f,(4)]	-	-	-
96-hour average	-	0.77[f,(4)]	-	-	-
Molybdenum	-	-	-	-	-
1-hour average	-	6,160[g]	-	-	-
96-hour average	-	1,650[g]	-	-	-
Nickel	13.4[a]	-	200[d]	-	-
1-hour average	-	(0.998) * e^(0.8460{ln(hardness)} + 2.255) f,(4)	-	-	-
96-hour average	-	(0.997) * e^(0.8460{ln(hardness)} + 0.0584) f,(4)	-	-	-
Selenium	50[b]	See NAC 445A.1237	20[d]	50[d]	-
Silver	-	-	-	-	-
1-hour average	-	(0.85) * e^(1.72{ln(hardness)} - 6.59) f,(4)	-	-	-
Sulfide (undissociated hydrogen sulfide)	-	-	-	-	-
96-hour average	-	2.0[f]	-	-	-
Thallium	13[a]	-	-	-	-
Zinc	-	-	2,000[d]	25,000[d]	-
1-hour average	-	(0.978) * e^(0.8473{ln(hardness)} + 0.884) f,(4)	-	-	-
96-hour average	-	(0.986) * e^(0.8473{ln(hardness)} + 0.884) f,(4)	-	-	-

ORGANIC CHEMICALS

Chemical	Municipal or Domestic Supply (µg/L)	Aquatic Life[1,2] (µg/L)	Irrigation (µg/L)	Watering of Livestock (µg/L)	*Recreation Involving Contact With the Water (µg/L)*
Acrolein	320[a]	-	-	-	-
1-hour average	-	3[f]	-	-	-
96-hour average	-	3[f]	-	-	-
Aldrin	0[a]	-	-	-	-
1-hour average	-	3.0[f]	-	-	-
alpha-Endosulfan	-	-	-	-	-
1-hour average	-	0.22[f]	-	-	-
96-hour average	-	0.056[f]	-	-	-
beta-Endosulfan	-	-	-	-	-
1-hour average	-	0.22[f]	-	-	-
96-hour average	-	0.056[f]	-	-	-
Benzene	5[b]	-	-	-	-
Bis (2-chloroisopropyl) ether	34.7[a]	-	-	-	-
Cylindrospermopsin	-	-	-	-	*15[j,k(8)]*
Chlordane	0[a]	-	-	-	-
1-hour average	-	2.4[f]	-	-	-
96-hour average	-	0.0043[f]	-	-	-
Chloroethylene (vinyl chloride)	2[b]	-	-	-	-
Chlorpyrifos	-	-	-	-	-
1-hour average	-	0.083[f]	-	-	-
96-hour average	-	0.041[f]	-	-	-
2,4-D	100[a,b]	-	-	-	-
DDT & metabolites	0[a]	-	-	-	-
4,4'-DDT	-	-	-	-	-
1-hour average	-	1.1[f,(6)]	-	-	-
96-hour average	-	0.001[f,(6)]	-	-	-
Demeton	-	-	-	-	-
96-hour average	-	0.1[f]	-	-	-
Diazinon	-	-	-	-	-
1-hour average	-	0.17[f]	-	-	-
96-hour average	-	0.17[f]	-	-	-
Dibutyl phthalate	34,000[a]	-	-	-	-
m-dichlorobenzene	400[a]	-	-	-	-
o-dichlorobenzene	400[a]	-	-	-	-
p-dichlorobenzene	75[b]	-	-	-	-
1,2-dichloroethane	5[b]	-	-	-	-
1,1-dichloroethylene	7[b]	-	-	-	-
2,4-dichlorophenol	3,090[a]	-	-	-	-
Dichloropropenes	87[a]	-	-	-	-
Dieldrin	0[a]	-	-	-	-
1-hour average	-	0.24[f]	-	-	-
96-hour average	-	0.056[f]	-	-	-
Di-2-ethylhexyl phthalate	15,000[a]	-	-	-	-
Diethyl phthalate	350,000[a]	-	-	-	-
Dimethyl phthalate	313,000[a]	-	-	-	-
4,6-dinitro-2-methylphenol	13.4[a]	-	-	-	-
Dinitrophenols	70[a]	-	-	-	-
Endosulfan	75[a]	-	-	-	-
Endrin	0.2[b]	-	-	-	-
1-hour average	-	0.086[f]	-	-	-
96-hour average	-	0.036[f]	-	-	-

Chemical	Municipal or Domestic Supply (µg/L)	Aquatic Life[1,2] (µg/L)	Irrigation (µg/L)	Watering of Livestock (µg/L)	***Recreation Involving Contact With the Water*** ***(µg/L)***
Ethylbenzene	1,400[a]	-	-	-	-
Fluoranthene (polynuclear aromatic hydrocarbon)	42[a]	-	-	-	-
Guthion	-	-	-	-	-
96-hour average	-	0.01[f]	-	-	-
Heptachlor	-	-	-	-	-
1-hour average	-	0.52[f]	-	-	-
96-hour average	-	0.0038[f]	-	-	-
~~[Heptachlor]~~ ***Heptachlor*** Epoxide	-	-	-	-	-
1-hour average	-	0.52[f]	-	-	-
96-hour average	-	0.0038[f]	-	-	-
Hexachlorocyclopentadiene	206[a]	-	-	-	-
Isophorone	5,200[a]	-	-	-	-
Lindane	4[b]	-	-	-	-
1-hour average	-	0.95[f]	-	-	-
Malathion	-	-	-	-	-
96-hour average	-	0.1[f]	-	-	-
Methoxychlor	100[a,b]	-	-	-	-
96-hour average	-	0.03[f]	-	-	-
Microcystins	-	-	-	-	***8[j,k(8)]***
Mirex	0[a]	-	-	-	-
96-hour average	-	0.001[f]	-	-	-
Monochlorobenzene	488[a]	-	-	-	-
Nitrobenzene	19,800[a]	-	-	-	-
Nonylphenol	-	-	-	-	-
1-hour average	-	28[f]	-	-	-
96-hour average	-	6.6[f]	-	-	-
Parathion	-	-	-	-	-
1-hour average	-	0.065[a]	-	-	-
96-hour average	-	0.013[a]	-	-	-
Pentachlorophenol	1,010[a]	-	-	-	-
1-hour average	-	$e^{1.005(pH) - 4.869}$[f]	-	-	-
96-hour average	-	$e^{1.005(pH) - 5.134}$[f]	-	-	-
Phenol	3,500[a]	-	-	-	-
Polychlorinated biphenyls (PCBs)	0[a]	-	-	-	-
96-hour average	-	0.014[f]	-	-	-
Silvex (2,4,5-TP)	10[a,b]	-	-	-	-
Tetrachloromethane (carbon tetrachloride)	5[b]	-	-	-	-
Toluene	14,300[a]	-	-	-	-
Toxaphene	5[b]	-	-	-	-
1-hour average	-	0.73[a]	-	-	-
96-hour average	-	0.0002[a]	-	-	-
Tributyltin (TBT)	-	-	-	-	-
1-hour average	-	0.46[f]	-	-	-
96-hour average	-	0.072[f]	-	-	-
1,1,1-trichloroethane (TCA)	200[b]	-	-	-	-
Trichloroethylene (TCE)	5[b]	-	-	-	-
Trihalomethanes (total)[7]	100[b]	-	-	-	-

Footnotes:

(1) One-hour average and 96-hour average concentration limits may be exceeded only once every 3 years. See reference a.

(2) "Hardness" is expressed as mg/L $CaCO_3$; and "e" refers to the base of the natural logarithm whose value is 2.718.

(3) The standards for metals are expressed as total recoverable, unless otherwise noted.

(4) This standard applies to the dissolved fraction.

(5) This standard is expressed as free cyanide.

(6) This standard applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).

(7) The standard for trihalomethanes (TTHMs) is the sum of the concentration of bromodicholoromethane, dibromocholoromethane, tribromomethane (bromoform) and trichloromethane (chloroform). See reference b.

(8) The applicable criterion value must not be exceeded in more than three separate 10-day non-rolling periods in consecutive water years. As used in this footnote, "water year" means the 12-month period beginning on October 1 and ending on September 30 of the immediately following calendar year.

References:

a. U.S. Environmental Protection Agency, Pub. No. EPA 440/5-86-001, *Quality Criteria for Water* (Gold Book) (1986).

b. Federal Maximum Contaminant Level (MCL), 40 C.F.R. §§ 141.11, 141.61 and 141.62 (1992).

c. U.S. Environmental Protection Agency, Pub. No. EPA 440/9-76-023, *Quality Criteria for Water* (Red Book) (1976).

d. National Academy of Sciences, *Water Quality Criteria* (Blue Book) (1972).

e. Not used to avoid confusion with "e" as a natural logarithm.

f. U.S. Environmental Protection Agency, *National Recommended Water Quality Criteria*, May 2009.

g. Nevada Division of Environmental Protection, *Aquatic Life Water Quality Criteria for Molybdenum,* Tetra Tech, Inc., (June 2008).

h. U.S. Environmental Protection Agency, Pub. No. EPA-820-R-16-002, *Aquatic Life Ambient Water Quality Criteria Cadmium - 2016*, March 2016.

i. U.S. Environmental Protection Agency, Pub. No. EPA 811-Z-92-002, *40 CFR Parts 141 and 142, National Primary Drinking Water Regulations; Synthetic Organic Chemicals and Inorganic Chemicals*; *Final Rule* (Table 1-MCLGs and MCLs for Inorganic Contaminants) (July 1992).

j. U.S. Environmental Protection Agency, Pub. No. EPA 823-R-21-002, Implementing the 2019 National Clean Water Act Section 304(a) Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin, July 2021.

k. U.S. Environmental Protection Agency, Pub. No. EPA 822-R-19-001, Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin, May 2019.

Permanent Regulation - Informational Statement

A Permanent Regulation Related to Environmental Programs

Legislative Review of Adopted Permanent Regulations as Required by Administrative Procedures Act, NRS 233B.066

State Environmental Commission
Permanent No: R149-24P

The Nevada State Environmental Commission (SEC) offers the following informational statement in compliance with Nevada Revised Statute (NRS) 233B.066.

1. Need for Regulation

EPA's regulations for water quality standards at 40 CFR 131.11 (a)(1) require states to adopt protective criteria that are based on scientific rationale to protect beneficial uses. Algal blooms caused by cyanobacteria can sometimes produce cyanotoxins at concentrations that can be harmful to people swimming or participating in other activities in or on the water. In May 2019, EPA issued recommendations for water quality criteria and swimming advisory values for cyanotoxins microcystin and cylindrospermopsin based on a rigorous scientific study. Adopting the algal toxin values for microcystin and cylindrospermopsin into Nevada's water quality standards is necessary to protect human health and adequately support the recreation involving contact with the water beneficial use.

2. A description of how public comment was solicited, a summary of public response and an explanation of how other interested persons may obtain a copy of the summary.

The Legislative Counsel Bureau published its draft, R149-24P, in the Nevada Register on July 25, 2024.

The NDEP held one hybrid (in-person and virtual) public workshop for R149-24P on August 11, 2025. The public was invited to participate in person in the Bryan Building at 901 South Stewart Street in Carson City, Nevada, as well as at the NDEP offices at 375 East Warm Springs Road in Las Vegas, Nevada. The workshop was held to present the substance of, and receive public comment on, the proposed regulation. Twenty-five members of the public and regulated industry attended the workshop either in person or virtually. During and after the public workshop, the Division received several verbal questions:

1) One commenter suggested that the criteria is not needed and that a Harmful Algal Bloom (HAB) advisory program already exists.

2) Another commenter asked whether the regulation would add additional administrative burden to the Division.
3) Another commenter asked how the algal toxin data would be considered for impairment determinations, given the transient nature of HAB event.

A summary of the workshop, including all public comment and bureau response, is included on the NDEP website as well as the SEC website.

The proposed regulations were also distributed to the Bureau of Air Quality Planning's email distribution list. The Division accepted written comments on R149-24I and R149-24P for 50 days ending on August 14, 2025.

The SEC held a hybrid regulatory hearing on September 9, 2025, to consider possible action on R149-24P. The SEC posted its public notice, which included a link[1] and instructions to access R149-24P and pertinent documents and information supporting the regulation, for the regulatory meeting at the State Library in Carson City, at Division offices located in both Carson City and Las Vegas, at all county libraries throughout the state, and to the SEC email distribution list. The SEC also posted the public notice at the Division of Minerals in Carson City, at the Department of Agriculture, on the LCB website, on the Division of Administration website, and on the SEC website.

The public notice was also published in the Las Vegas Review Journal and Reno Gazette Journal newspapers once per week for three consecutive weeks prior to the SEC regulatory meeting.

3. The number of persons who attended the SEC Regulatory Hearing:

(a) Attended September 9, 2025, hearing: 51 (approximately)
(b) Testified on this petition at the hearing: 2

1. Jason Kuchnicki, on behalf of the Nevada Division of Environmental Protection
   901 South Stewart Street, Suite 4001
   Carson City, Nevada 89701
   (775) 687-9450
   kuchnicki@ndep.nv.gov

2. Seth Alm, on behalf of the Nevada Division of Environmental Protection
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[1] https://sec.nv.gov/meetings/sec-meeting-september-9-2025

(c) Submitted to the agency written comments: None

4. A description of how comment was solicited from affected businesses, a summary of their response, and an explanation of how other interested persons may obtain a copy of the summary.

Comments were solicited from affected businesses through one public workshop and at the September 9, 2025, SEC hearing as noted in number 2 above. There were no public comments during the September 9, 2025, SEC meeting:

5. If the regulation was adopted without changing any part of the proposed regulation, a summary of the reasons for adopting the regulation without change.

The Commissioners unanimously adopted R149-24P with greenlined changes because the SEC was satisfied with the proposed regulation. Note that the only change to the LCB draft of R149-24 is to add an "s" at the end of the word "microcystin" in two places: the Legislative Council Digest (page 1) and the table is Section 1, page 5.

6. The estimated economic effect of the adopted regulation on the business which it is to regulate and on the public.

Regulated Business/Industry: There are no economic impacts to businesses associated with this action in the short- or long-term.

Public: There are no adverse or economic impacts on the public associated with this action in the short- or long-term.

7. The estimated cost to the agency for enforcement of the adopted regulation.

Enforcing Agency. The proposed amendments will have no economic effect on the agency.

8. A description of any regulations of other state or government agencies which the proposed regulation overlaps or duplicates and a statement explaining why the duplication or overlapping is necessary. If the regulation overlaps or duplicates a federal regulation, the name of the regulating federal agency.

Not applicable; the proposed amendments do not duplicate any other state or government regulations.

9. If the regulation includes provisions which are more stringent than a federal regulation, which regulates the same activity, a summary of such provisions.

The proposed amendments do not include requirements that are more stringent than the regulations of other state or federal agencies.

10. If the regulation provides a new fee or increases an existing fee, the total annual amount the agency expects to collect and the manner in which the money will be used.

R149-24P does not provide for any new fees or increases to existing fees.