

Proposed Changes to
NAC 445A.1236
Standards for Toxic Materials:
AQUATIC LIFE UPDATES

Nevada Division of Environmental Protection
Bureau of Water Quality Planning

Clean Water Act Section 304(a)

- 2009 National Recommended Water Quality Criteria published by EPA
- States & Tribes encouraged to incorporate new or revised 304(a) water quality criteria into water quality standards programs

Options for Incorporating New 304(a) Criteria

- 1) Adopt the recommended 304(a) criteria
- 2) Adopt the 304(a) criteria modified to reflect site-specific conditions
- 3) Adopt criteria derived using other scientifically defensible methods that will protect beneficial uses of the waters

Toxic Chemicals

- NAC 445A.1236: Standards for Toxic Materials Applicable to Designated Waters
- Four Beneficial Uses
 - Municipal or Domestic Supply
 - Aquatic Life
 - Irrigation
 - Watering of Livestock

Update of Standards for Toxic Chemicals

- Standards for aquatic life only
- Alphabetize toxic tables

Proposed Updates

- **Amended Aquatic Life Criteria:**

Aldrin, Chlordane, DDT/4,4'-DDT, Demeton, Dieldrin, Endrin, Guthion, Heptachlor, Lindane, Malathion, Methoxychlor, Mirex, Pentachlorophenol, and PCBs.

- **New Aquatic Life Criteria:**

Acrolein, alpha-Endosulfan, beta-Endosulfan, Chlorpyrifos, Diazinon, Heptachlor Epoxide, Nonylphenol, and Tributyltin (TBT)

Comparison of Existing and Proposed Aquatic Life Standards for Organic Chemicals

Chemical	Existing Aquatic Life Standards (µg/l)	Proposed Aquatic Life Standards (µg/l)
Aldrin 1-hour average	3 -	- 3
Chlordane 1-hour average 24-hour average 96-hour average	2.4 - 0.0043 -	- 2.4 - 0.0043
DDT & metabolites 24-hour average 4,4'-DDT 1-hour average 96-hour average	1.1 0.0010 - - -	- - - 1.1 0.001
Demeton 1-hour average	0.1 -	- 0.1

Comparison of Existing and Proposed Aquatic Life Standards for Organic Chemicals

Chemical	Existing Aquatic Life Standards (µg/l)	Proposed Aquatic Life Standards (µg/l)
Dieldrin	2.5	-
1-hour average	-	0.24
24-hour average	0.0019	-
96-hour average	-	0.056
Endrin	0.18	-
1-hour average	-	0.086
24-hour average	0.0023	-
96-hour average	-	0.036
Guthion	0.01	-
96-hour average	-	0.01
Heptachlor	0.52	-
1-hour average	-	0.52
24-hour average	0.0038	-
96-hour average	-	0.0038

Comparison of Existing and Proposed Aquatic Life Standards for Organic Chemicals

Chemical	Existing Aquatic Life Standards (µg/l)	Proposed Aquatic Life Standards (µg/l)
Lindane	2.0	-
1-hour average	-	0.95
24-hour average	0.080	-
Malathion	0.1	-
96-hour average	-	0.1
Methoxychlor	0.03	-
96-hour average	-	0.03
Mirex	0.001	-
96-hour average	-	0.001
Pentachlorophenol	-	-
1-hour average	$\exp\{1.005(\text{pH})-4.830\}$	$e^{1.005(\text{pH}) - 4.869}$
96-hour average	$\exp\{1.005(\text{pH})-5.290\}$	$e^{1.005(\text{pH}) - 5.134}$

Comparison of Existing and Proposed Aquatic Life Standards for Organic Chemicals

Chemical	Existing Aquatic Life Standards (µg/l)	Proposed Aquatic Life Standards (µg/l)
PCBs	-	-
24-hour average	0.014	-
96-hour average	-	0.014

Proposed New Aquatic Life Standards for Organic Chemicals

Chemical	Proposed Aquatic Life Standards (µg/l)
Acrolein	-
1-hour average	3
96-hour average	3
alpha-Endosulfan	-
1-hour average	0.22
96-hour average	0.056
beta-Endosulfan	-
1-hour average	0.22
96-hour average	0.056
Chlorpyrifos	-
1-hour average	0.083
96-hour average	0.041

Proposed New Aquatic Life Standards for Organic Chemicals

Chemical	Proposed Aquatic Life Standards ($\mu\text{g/l}$)
4,4'-DDT	-
1-hour average	1.1
96-hour average	0.001
Diazinon	-
1-hour average	0.17
96-hour average	0.17
Heptachlor Epoxide	-
1-hour average	0.52
96-hour average	0.0038
Nonylphenol	-
1-hour average	28
96-hour average	6.6

Proposed New Aquatic Life Standards for Organic Chemicals

Chemical	Proposed Aquatic Life Standards ($\mu\text{g/l}$)
Tributyltin (TBT)	-
1-hour average	0.46
96-hour average	0.072

DRAFT RATIONALE DOCUMENT AND FACT SHEET

Questions/Comments

Petition, Rationale, and Factsheet available electronically

Nevada Division of Environmental Protection
Website under Water Quality Planning

<http://ndep.nv.gov/admin/public.htm>

Questions/Comments

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