



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

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Proposed Changes to Select Water Quality Standards for Toxic Materials (NAC 445A.1236) Related to Aquatic Life Beneficial Use

FACT SHEET

April 2012

Background

Section 303 of the Clean Water Act and 40 CFR 131 give states responsibility for setting, reviewing, and revising water quality standards. Water quality standards include criteria that provide limits on a particular pollutant or limits on a condition of a waterbody designed to protect and support a designated use. Under Section 304(a) of the Clean Water Act, the U.S. Environmental Protection Agency (EPA) publishes and periodically updates water quality criteria reflecting the latest scientific data and information on the environmental effects of pollutants. The revised criteria are used by States and Tribes to update water quality standards that provide for the protection and propagation of aquatic life and wildlife; recreation in and on the water; public water supplies; and agricultural and industrial uses. State of Nevada requirements for water quality standards are contained in the Nevada Revised Statutes (NRS) 445A.425, 445A.520, and 445A.565 and water quality standards for waters of Nevada are found in the Nevada Administrative Code (NAC) 445A.118 through 445A.2234.

Proposed Regulation Changes

The Nevada Division of Environmental Protection (NDEP) is proposing changes to select water quality standards for toxic chemicals related to aquatic life. The proposed changes involve amending or adding aquatic life standards in NAC 445A.1236, "Standards for Toxic Materials Applicable to Designated Waters." In addition, some modifications to the table are proposed to help with clarification of the toxic standards. The proposed revisions are based on updated criteria values that have been recommended by EPA as national recommended water quality criteria for protection of aquatic life [2009]. No changes are proposed to be made at this time to standards contained in NAC 445A.1236 related to municipal or domestic supply, irrigation, or watering of livestock.

The proposed amendments and additions are summarized in the following tables. Table 1 compares the existing and the proposed aquatic life criteria for toxic chemicals. Table 2 contains proposed new aquatic life standards for inorganic chemicals for inclusion in NAC 445A.1236. Table 3 contains proposed new aquatic life standards for organic chemicals for inclusion in NAC 445A.1236.

The rationale document and the draft petition are available online at <http://ndep.nv.gov/admin/public.htm> under Water Quality Planning.

For questions, comments or additional information please contact:

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Table 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) |
|----------------------------------|--|--|
| Aldrin | 3.0 | - |
| 1-hour average | - | 3.0 |
| Chlordane | 2.4 | - |
| 1-hour average | - | 2.4 |
| 24-hour average | 0.0043 | - |
| 96-hour average | - | 0.0043 |
| Demeton | 0.1 | - |
| 96-hour average | - | 0.1 |
| DDT & metabolites | 1.1 | - |
| 24-hour average | 0.0010 | - |
| 4,4'-DDT ¹ | - | - |
| 1-hour average | - | 1.1 |
| 96-hour average | - | 0.001 |
| 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 |
| 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 | $\exp\{1.005(\text{pH})-5.290\}$ | $e^{1.005(\text{pH}) - 5.134}$ |
| Polychlorinated Biphenyls (PCBs) | - | - |
| 24-hour average | 0.014 | - |
| 96-hour average | - | 0.014 |

Table 2. Proposed New Aquatic Life Standards for Inorganic Chemicals for

¹ This standard applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).

Inclusion in NAC 445A.1236.

| Chemical | Aquatic Life Standards (µg/l) |
|-----------------------|--------------------------------------|
| Chlorine ² | |
| 1-hour average | 19 |
| 96-hour average | 11 |

Table 3. Proposed New Aquatic Life Standards for Organic Chemicals for Inclusion in NAC 445A.1236.

| Chemical | 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 |
| 4,4'-DDT ³ | - |
| 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 |
| Tributyltin (TBT) | - |
| 1-hour average | 0.46 |
| 96-hour average | 0.072 |

² This standard is expressed as total residual chlorine. The term “total residual chlorine” refers to the sum of free chlorine and combined chlorine in fresh water.

³ This standard applies to DDT and its metabolites (i.e., the total concentration of DDT and its metabolites should not exceed this value).