

**PROPOSED REGULATION OF THE
STATE ENVIRONMENTAL COMMISSION
PROPOSED GROUNDWATER REGULATION**

SEC File No P2008-18

Revised on August 20, 2008

EXPLANATION – Matter underlined are new; matter with ~~strickethrough~~ are material to be omitted.

AUTHORITY: §§1-3, NRS 445A.300 to 445A.730.

A REGULATION to control discharges of pollutants through a permitting process into waters of the State in manner which would not cause the receiving groundwater to exceed criteria established for drink water standards.

WATER POLLUTION CONTROL

General Provisions

445A.070	Definitions.
445A.071	“A.G.M.” defined.
445A.072	“Act” defined.
445A.073	“Acute toxicity value” defined.
445A.074	“Administrator” defined.
445A.0745	“Annual mean flow” defined.
445A.075	“Aquatic animal production facility” defined.
445A.077	“Commission” defined.
445A.078	“Complete treatment” defined.
445A.079	“Conventional treatment” defined.
445A.080	“Department” defined.
445A.081	“Director” defined.
445A.082	“Discharge” defined.
445A.083	“Disinfection” defined.
445A.084	“Division” defined.
445A.0845	“E coli” defined.
445A.085	“Effluent limitation” defined.
445A.086	“Filtration” defined.
445A.0865	“Flow weighted annual average concentration” defined.
<u>445A.0868</u>	<u>“Groundwater” defined</u>
445A.087	“Individual sewage disposal system” defined.
445A.088	“Industrial user” defined.
445A.089	“Industrial wastes” defined.
445A.090	“Interstate agency” defined.
445A.091	“Law” defined.
445A.092	“Minor discharge” defined.
445A.093	“Municipality” defined.
445A.094	“NPDES” defined.

445A.095	“Natural waters” defined.
445A.096	“New source” defined.
445A.097	“Origin” defined.
445A.098	“Permit” defined.
445A.099	“Person” defined.
445A.100	“Point source” defined.
445A.101	“Pollutant” defined.
445A.102	“Pollution” defined.
445A.103	“Pretreatment program” defined.
445A.104	“Pretreatment standards” defined.
445A.106	“Regional Administrator” defined.
445A.107	“Sewage” defined.
445A.108	“Source” defined.
445A.109	“Standard of performance” defined.
445A.110	“Toxic material” defined.
445A.111	“Treatment or waste treatment” defined.
445A.112	“Treatment works” defined.
445A.113	“Water quality standards or limitations” defined.
445A.114	“Waters of the State” defined.
445A.115	“Zone of mixing” defined.
445A.116	“Zone of passage” defined.
445A.117	Severability.
	Standards for Water Quality
	Definitions.
445A.11704	“A-Avg.” or “A.A.” defined.
445A.11708	“Ä” defined.
445A.11712	”Ä pH” defined.
445A.11716	“Ä T” defined.
445A.1172	“Geometric mean” defined.
445A.11724	“HR” defined.
445A.11732	“M.D.B. & M.” defined.
445A.11736	“mg/l” defined.
445A.1174	“No./100ml” defined.
445A.11744	“NTU” defined.
445A.11748	“PCU” defined.
445A.11752	“pH unit” defined.
445A.11756	“SAR” defined.
445A.1176	“S.V.” defined.
445A.11768	“Trout water” defined.
445A.11772	“=” defined.
445A.11776	“=” defined.
445A.1178	“=” defined.
445A.118	Water quality criteria for total ammonia.
<u>445A.119</u>	<u><i>Groundwater Criteria</i></u>
445A.120	Applicability.
445A.121	Standards applicable to all surface waters.
445A.122	Standards applicable to beneficial uses.
445A.123	Classification and reclassification of waters.
445A.124	Class A waters: Description; beneficial uses; quality standards.
445A.125	Class B waters: Description; beneficial uses; quality standards.

445A.126	Class C waters: Description; beneficial uses; quality standards.
445A.127	Class D waters: Description; beneficial uses; quality standards.
445A.143	Cooperation regarding Colorado River; salinity standards.
445A.144	Standards for toxic materials applicable to designated waters.
445A.145	Control points: Prescription and applicability of numerical standards for water quality; designation of beneficial uses.
445A.146	Beneficial uses for Carson River.
445A.147	Carson River: West Fork at the state line.
445A.148	Carson River: Bryant Creek near the state line.
445A.149	Carson River: East Fork at the state line.
445A.150	Carson River: East Fork at Highway 395, south of Gardnerville.
445A.151	Carson River: East Fork at Muller Lane.

NAC 445A.0868 “Groundwater” defined (NRS 445A.425) “Groundwater” means water below the surface of the land which is in a zone of saturation.

NAC 445A.119 Groundwater Criteria

- Unless otherwise determined, all groundwater in the State of Nevada shall be considered potential drinking water. A discharge that may affect groundwater may not cause the receiving groundwater to exceed the following criteria:

Criteria

<u>Antimony</u>	<u>0.006 mg/L</u>
<u>Arsenic</u>	<u>0.010 mg/L</u>
<u>Barium</u>	<u>2.0 mg/L</u>
<u>Beryllium</u>	<u>0.004 mg/L</u>
<u>Cadmium</u>	<u>0.005 mg/L</u>
<u>Chromium (total)</u>	<u>0.1 mg/L</u>
<u>WAD cyanide</u>	<u>0.2 mg/L</u>
<u>Fluoride</u>	<u>4.0 mg/L</u>
<u>Lead</u>	<u>0.015 mg/L</u>
<u>Mercury (inorganic)</u>	<u>0.002 mg/L</u>
<u>Total Nitrogen (as Nitrogen)</u>	<u>10 mg/L</u>
<u>Nitrite (as Nitrogen)</u>	<u>1.0 mg/L</u>
<u>Selenium</u>	<u>0.05 mg/L</u>
<u>Thallium</u>	<u>0.002 mg/L</u>
<u>Uranium</u>	<u>0.030 mg/L</u>
<u>Aluminum</u>	<u>0.2 mg/L</u>
<u>Chloride</u>	<u>400 mg/L</u>
<u>Color</u>	<u>15 (color units)</u>
<u>Copper</u>	<u>1.0 mg/L</u>
<u>Corrosivity</u>	<u>noncorrosive</u>

<u>Foaming Agents</u>	<u>0.5 mg/L</u>
<u>Iron</u>	<u>0.6 mg/L</u>
<u>Magnesium</u>	<u>150 mg/L</u>
<u>Manganese</u>	<u>0.1 mg/L</u>
<u>Odor</u>	<u>3 threshold odor number</u>
<u>pH</u>	<u>6.5-8.5</u>
<u>Silver</u>	<u>0.10 mg/L</u>
<u>Sulfate</u>	<u>500 mg/L</u>
<u>Total Dissolved Solids</u>	<u>1000 mg/L</u>
<u>Zinc</u>	<u>5.0 mg/L</u>

Organic Criteria

<u>Alachlor</u>	<u>0.002 mg/L</u>	<u>Ethylbenzene</u>	<u>0.7 mg/L</u>
<u>Atrazine</u>	<u>0.003 mg/L</u>	<u>Ethylene dibromide</u>	<u>0.00005 mg/L</u>
<u>Benzene</u>	<u>0.005 mg/L</u>	<u>Glyphosate</u>	<u>0.7 mg/L</u>
<u>Benzo(a)pyrene (PAHs)</u>	<u>0.0002 mg/L</u>	<u>Heptachlor</u>	<u>0.0004 mg/L</u>
<u>Carbofuran</u>	<u>0.04 mg/L</u>	<u>Heptachlor epoxide</u>	<u>0.0002 mg/L</u>
<u>Carbon tetrachloride</u>		<u>Hexachlorobenzene</u>	<u>0.001 mg/L</u>
<u>Chlordane</u>	<u>0.002 mg/L</u>	<u>Hexachlorocyclopentadiene</u>	<u>0.05 mg/L</u>
<u>Chlorobenzene</u>	<u>0.1 mg/L</u>	<u>Lindane</u>	<u>0.0002 mg/L</u>
<u>2,4-D</u>	<u>0.07 mg/L</u>	<u>Methoxychlor</u>	<u>0.04 mg/L</u>
<u>Dalapon</u>	<u>0.2 mg/L</u>	<u>Oxamyl (Vydate)</u>	<u>0.2 mg/L</u>
<u>1,2-Dibromo-3-chloropropane (DBCP)</u>	<u>0.0002 mg/L</u>	<u>Polychlorinated biphenyls (PCBs) as Decachlorobiphenyl</u>	
<u>o-Dichlorobenzene</u>	<u>0.6 mg/L</u>	<u>Pentachlorophenol</u>	<u>0.001 mg/L</u>
<u>p-Dichlorobenzene</u>	<u>0.075 mg/L</u>	<u>Picloram</u>	<u>0.5 mg/L</u>
<u>1,2-Dichloroethane</u>	<u>0.005 mg/L</u>	<u>Simazine</u>	<u>0.004 mg/L</u>
<u>1,1-Dichloroethylene</u>	<u>0.007 mg/L</u>	<u>Styrene</u>	<u>0.1 mg/L</u>
<u>cis-1,2-Dichloroethylene</u>	<u>0.07 mg/L</u>	<u>Tetrachloroethylene</u>	<u>0.005 mg/L</u>
<u>trans-1,2-Dichloroethylene</u>	<u>0.1 mg/L</u>	<u>Toluene</u>	<u>1.0 mg/L</u>
<u>Dichloromethane</u>	<u>0.005 mg/L</u>	<u>Toxaphene</u>	<u>0.003 mg/L</u>
<u>1,2-Dichloropropane</u>	<u>0.005 mg/L</u>	<u>2,4,5-TP (Silvex)</u>	<u>0.05 mg/L</u>
<u>Di(2-ethylhexyl) adipate</u>	<u>0.4 mg/L</u>	<u>1,2,4-Trichlorobenzene</u>	<u>0.07 mg/L</u>
<u>Di(2-ethylhexyl) phthalate</u>	<u>0.006 mg/L</u>	<u>1,1,1-Trichloroethane</u>	<u>0.2 mg/L</u>
<u>Dinoseb</u>	<u>0.007 mg/L</u>	<u>1,1,2-Trichloroethane</u>	<u>0.005 mg/L</u>
<u>Dioxin (2,3,7,8-TCDD)</u>	<u>3E-08 mg/L</u>	<u>Trichloroethylene</u>	<u>0.005 mg/L</u>
<u>Diquat</u>	<u>0.02 mg/L</u>	<u>Vinyl chloride</u>	<u>0.002 mg/L</u>
<u>Endothall</u>	<u>0.1 mg/L</u>	<u>Xylenes (total)</u>	<u>10 mg/L</u>
<u>Endrin</u>	<u>0.002 mg/L</u>		

2. If the receiving groundwater already exceeds the criteria in subsection (1), a discharge shall not cause further degradation of groundwater quality beyond existing levels.
3. A zone of saturation that cannot produce usable water is not subject to the criteria in subsection (1), however, discharge to such a zone is not allowed if it has the potential to cause nearby usable groundwater to exceed the groundwater criteria.
4. The Department may establish a value for any constituent not regulated by the above criteria that may reasonably be expected to be discharged by the facility in sufficient volume and concentration to cause an adverse impact on human health and the environment.

MINING FACILITIES

General Provisions

EXPLANATION – Matter underlined are new; matter with ~~strikethrough~~ are material to be omitted.

NAC 445A.361 “Groundwater” defined. (NRS 445A.425, 445A.465) “Groundwater” ~~means all subsurface water comprising the zone of saturation, including perched zones of saturation, which could produce usable water.~~ has the meaning ascribed to it in NAC 445A.0868.

(Added to NAC by Environmental Comm’n, eff. 9-1-89)—(Substituted in revision for NAC 445.24222)

NAC 445A.424 Limitations on degradation of water; exemptions. (NRS 445A.425, 445A.465)

1. A facility, regardless of size or type, may not degrade the waters of the State to the extent that:

(a) The quality of surface water is lowered below that allowed by NRS 445A.565.

(b) ~~For~~ The quality of groundwater:

~~—(1) The quality is lowered below a state or federal regulation prescribing standards for drinking water; or that allowed by NAC 445A.119.~~

~~(2) The concentration of WAD cyanide exceeds 0.2 mg/l.~~

↪ The Department may establish a numerical limit for any constituent not regulated by subparagraphs (1) ~~and (2)~~ which may reasonably be expected to be discharged by the facility in sufficient volume and concentration to cause an adverse impact on human health.

(c) The quality of those waters of the State which already exceed the criteria established by subsection 2 is lowered to a level that the Department finds would render those waters unsuitable for the existing or potential municipal, industrial, domestic or agricultural use.

2. The Department may exempt a body of groundwater or portion thereof from the NAC 445A.119 criteria ~~standards established in subsection 1~~ if the request for an exemption to the NAC 445A.119 criteria groundwater standards and the supporting information is submitted as part of the application for the permit. The following ~~criteria~~ factors will be considered by the Department in determining whether to exempt a potentially impacted body of groundwater from the ~~standards criteria~~ in subsection 1 NAC 445A.119:

(a) The impacted groundwater does not currently serve as a source of drinking water and because of the following reasons the groundwater will not serve as a source of drinking water:

(1) The groundwater produces a mineral, hydrocarbon or geothermal fluid which the applicant can demonstrate to the satisfaction of the Department exists at a concentration that is expected to be capable of commercial production and that releases by the facility will not affect this production;

(2) The groundwater is situated at a depth or location which makes recovery of water for drinking economically or technologically impractical; or

(3) It would be economically or technologically impractical to render the water fit for human consumption; or

(b) The total dissolved solids in the groundwater is more than 10,000 milligrams per liter and the groundwater is not reasonably expected to become a supply of drinking water.

(Added to NAC by Environmental Comm'n, eff. 9-1-89)—(Substituted in revision for NAC 445.24342)

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