

Water Quality Standards

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FACT SHEET

2008 Proposed Revisions to Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances

What is the Toxics Manual? The “Toxics Manual” is another name for the *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Substances*. The Toxics Manual establishes standards (criteria) that limit the amount of toxic pollutants in Alaska’s waters. These toxics criteria ensure that Alaska’s waters remain drinkable, swimmable and fishable.

Alaska’s water quality standards provide the legal framework to protect and maintain water quality. The *Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Substances* has been adopted by reference into the Alaska Water Quality Standards (18 AAC 70). The Clean Water Act requires states to update state toxics criteria to be consistent with national recommended criteria within three to five years.

What is the proposal? The proposed revision will update most toxics criteria to reflect EPA’s current national recommendations. This revision also intends to make the Toxics Manual easier to use by reorganizing the numeric criteria into a single table format which shows all criteria for each parameter. This allows quick identification of the most stringent applicable criteria for any substance.

Criteria for toxic and deleterious substances found under 18 AAC 70.020 (11) and (23) have been updated to reflect the reorganization of the Toxics Manual. To this end, references to table numbers and columns in the 2003 Toxics Manual have been replaced with the names of the criteria types (e.g. drinking water, aquatic life) as shown in the columns in the new table in the proposed Toxics Manual. This change reflects the reformatting of the Toxics Manual only; the criteria assigned to protect each designated use remain unchanged unless otherwise noted.

This update includes the following substantive changes to criteria:

	Drinking Water	Freshwater Acute	Freshwater Chronic	Saltwater Acute	Saltwater Chronic
Aldicarb	New	N/A	N/A	N/A	N/A
Aldicarb Sulfone	New	N/A	N/A	N/A	N/A
Aldicarb Sulfoxide	New	N/A	N/A	N/A	N/A
Aluminum	Unchanged	Unchanged	Less Stringent	Unchanged	Unchanged
Ammonia (total)	N/A	Unchanged	Unchanged	More Stringent	More Stringent
Arsenic	More Stringent	Unchanged	Unchanged	Unchanged	Unchanged
Diazinon	N/A	New	New	New	New
Nickel	Deleted	Unchanged	Unchanged	Unchanged	Unchanged
Nonylphenol	N/A	New	New	New	New
Tributyltin	N/A	Unchanged	Less Stringent	Less Stringent	More Stringent
Uranium	New	N/A	N/A	N/A	N/A

Drinking Water Criteria Changes: These changes reflect updates to Alaska's drinking water (DW) criteria, as contained in 18 AAC 80.300. Changes to the drinking water criteria can be summarized as follows:

- **Aldicarb, Aldicarb Sulfone, and Aldicarb Sulfoxide** (new): New DW criteria are based on *National Primary Drinking Water Regulations; Monitoring for VOC; MCLGs and MCLs for Aldicarb, Aldicarb Sulfoxide, Aldicarb Sulfone, Pentachlorophenol, and Barium* (56 FR 30266), which established Maximum Contaminant Levels (MCLs) for these three pollutants.
- **Arsenic** (more stringent). The arsenic criterion was decreased from 0.05 mg/L to 0.01 mg/L in light of updated EPA guidance documents. References: *Arsenic and Clarifications to Compliance and New Source Contaminants Monitoring Final Rule* (66 FR 6976) and *Minor Clarification of National Primary Drinking Water Regulation for Arsenic; Final Rule* (68 FR 14501).
- **Nickel** (deleted): The Nickel DW criteria were deleted entirely in light of EPA guidance. EPA remanded the nickel MCL in light of a court order in 1995. The final rule was published in *National Pollutant Discharge Elimination System and Pretreatment Programs; State and Local Assistance Programs; Effluent Limitations Guidelines and Standards; Public Water Supply and Underground Injection Control Programs: Removal of Legally Obsolete or Redundant Rules* (60 FR 33929).

- **Uranium** (new): New DW criterion is based on *National Primary Drinking Water Regulations; Radionuclides; Final Rule* (65 FR 76707), which established an MCL for this pollutant.

Freshwater Aquatic Life Criteria Changes:

- **Aluminum** chronic criterion (less stringent): The existing freshwater chronic aquatic life criterion has been updated to take pH and hardness into consideration based on scientific understanding of chronic aluminum toxicity. The factsheet for the proposed change to the aluminum criteria explains this change in more detail.
- **Diazinon** acute and chronic criteria (new): New freshwater aquatic life criteria are based on *Notice of Availability of Final Recommended Aquatic Life Ambient Water Quality Criteria for Diazinon* (71 FR 9336), which established a standard for this pollutant.
- **Nonylphenol** acute and chronic criteria (new): New freshwater aquatic life criteria are based on *Notice of Availability of Final Aquatic Life Ambient Water Quality Criteria for Nonylphenol*. (71 FR 9337), which established a standard for this pollutant.
- **Tributyltin** chronic criterion (less stringent): The numeric value of the chronic criterion has been raised based on EPA guidance given in *Ambient Aquatic Life Water Quality Criteria for Tributyltin (TBT) - Final* (EPA 822-R-03-031).

Salt Water Aquatic Life Criteria Changes:

- **Ammonia** acute and chronic criteria (correction – more stringent): Correction of a unit conversion error in the salt water ammonia criteria tables will cause the criteria to become slightly more stringent. This error occurred when the molecular weight of nitrogen was used for the calculations rather than the molecular weight of ammonia. The criteria were published in *Ambient Water Quality Criteria for Ammonia (Saltwater)*, EPA 440-5-88-004.
- **Diazinon** acute and chronic criteria (new): New salt water aquatic life criteria are based on *Notice of Availability of Final Recommended Aquatic Life Ambient Water Quality Criteria for Diazinon* (71 FR 9336), which established a standard for this pollutant.
- **Nonylphenol** acute and chronic criteria (new): New salt water aquatic life criteria are based on *Notice of Availability of Final Aquatic Life Ambient Water Quality Criteria for Nonylphenol*. (71 FR 9337), which established a standard for this pollutant.
- **Tributyltin** acute and chronic criteria (less stringent and more stringent, respectively): The numeric values of the acute and chronic criteria have been modified based on EPA guidance given in *Ambient Aquatic Life Water Quality Criteria for Tributyltin (TBT) - Final* (EPA 822-R-03-031).

Human Health Criteria: Alaska does not plan on updating the human health criteria at this time. Alaska's human health criteria will be updated when information from other EPA Region 10 states' human health criteria (which are still in EPA review) is available. The outcome of this review will help guide Alaska in future human health criteria updates. The factsheet for the human health criteria explains this issue in more detail.

Narrative Criteria Changes: While Alaska's water quality standards (WQS) contain many numeric criteria for toxic substances, many known toxic substances have no numeric criteria. Descriptive narrative criteria for toxic substances protect against the adverse effects of a vast array of substances whose toxicity is either unknown or insufficiently quantified to specify numeric criteria.

New narrative criteria are being added to the standards for toxic substances in 18 AAC 70.020(b)(11) and (23) to protect designated uses that currently only have numeric criteria. These new narratives will not be added to those uses with existing narrative language, which already provides sufficient and more specific protection for those uses.

Procedures for applying water quality criteria: A provision has been added under 18 AAC 70.040(4) to clarify that where both a numeric and a narrative criterion apply for a substance, the numeric criterion is presumed to satisfy the narrative criteria for that substance. More stringent permit limits may be used to address cumulative or synergistic effects caused by pollutants in one or more discharges.

New definition for "deleterious substances": A definition has been added for "deleterious substances" which are also regulated under these criteria. DEC proposes that "deleterious substances" means any nontoxic substance which may cause the tainting of edible species of fish, taste and odors in drinking water supplies, or the reduction of the usability of water without causing physical injury to water users or aquatic and terrestrial organisms.

What's next? The proposed regulations and factsheets can be found at <http://www.dec.state.ak.us/water/wqsar/wqs/index.htm>

DEC will be scheduling workshops to answer questions that the public may have about this proposal. No public testimony will be taken at these workshops. Attend a workshop to learn more about this proposal:

Juneau: 4 pm to 6 pm on Tuesday, January 20, 2009, Main Conference Room, Alaska Department of Environmental Conservation, 410 Willoughby Avenue, Juneau, AK 99811

Fairbanks: 4 pm to 6 pm on Wednesday, January 21, 2009, Conference Room B/C, Alaska Department of Environmental Conservation, 610 University Avenue, Fairbanks, AK 99709

Oral or written testimony may be given at a public hearing from 4 pm to 6 pm on Thursday, January 22, 2009, 1st Floor Main Conference Room, Alaska Department of Environmental Conservation, 555 Cordova Street, Anchorage, AK 99501. Statewide call-in available by dialing 1-800-315-6338, Conference Code 2881 followed by the pound (#) sign.

All written comments must be received by 5 PM on February 6, 2009.

Comments should be mailed or emailed to:

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