

Corrections and Clarifications to Toxics Water Quality Standards Regulations Rulemaking

Proposed Rule Revisions

This document is organized in the following way. The first section is organized by rule and provides a summary of what the proposed rule changes are intending to accomplish. The second section following the summary is the actual rule language showing proposed changes in redline/strikeout.

Section 1: Summary of Proposed Changes

- 1. 340-041-0033(1-5): Please see separate documents to reference the new proposed Table 30 and revisions to Table 40. Note that Tables 20, 33A, and 33B will be struck from this rule.**

Proposed changes to the Toxic Substances rule reflect the movement of the aquatic life criteria from Tables 20, 33A, and 33B into a new aquatic life criteria table, Table 30. As a result of this movement, Tables 20, 33A, and 33B are no longer needed and are proposed to be deleted. Table 30 contains criteria that (1) EPA approved in their Jan. 31, 2013 action; (2) remained unchanged; (3) are proposed to address an EPA disapproval; and (4) were previously effective (i.e. criteria contained in Table 20) for those cases where EPA disapproved pollutant criteria contained Tables 33A or 33B and DEQ is not proposing remedies to address the disapprovals at this time. When a criterion submitted to EPA by the state is disapproved by EPA, the previously effective criterion remains in effect for federal Clean Water Act purposes.

DEQ intends to correct EPA's disapproval of 11 pesticides criteria (see Table 1 below) and the freshwater aquatic life criteria for selenium in this rulemaking. DEQ anticipates addressing EPA's disapproval of the freshwater aquatic life criteria for the following pollutants in a subsequent rulemaking(s): aluminum, ammonia, cadmium (acute only), and copper.

Table 1: Pesticide Disapprovals

Pollutant	Freshwater		Saltwater	
	Acute	Chronic	Acute	Chronic
Aldrin	disapproved	--	disapproved	
BHC gamma (Lindane)		disapproved	disapproved	
Chlordane	disapproved	disapproved	disapproved	disapproved
DDT 4,4'	disapproved	disapproved	disapproved	disapproved

Diieldrin			disapproved	disapproved
Endosulfan	disapproved	disapproved	disapproved	disapproved
Endosulfan alpha	disapproved	disapproved	disapproved	disapproved
Endosulfan beta	disapproved	disapproved	disapproved	disapproved
Endrin			disapproved	disapproved
Heptachlor	disapproved	disapproved	disapproved	disapproved
Heptachlor Epoxide	disapproved	disapproved	disapproved	disapproved

The Secretary of State Bulletin now allows tables to be attached to the Oregon Administrative Rules; therefore, proposed changes found at the end of the Toxic Substances rule state that Tables 30, 33C, and 40 will be attached as PDF documents (see this language at the end of the Arsenic Reduction Policy proposed rule changes in Section 2).

2. 340-041-0033(7) Arsenic Reduction Policy Rule Language

The Arsenic Reduction Policy rule adopted by the Environmental Quality Commission in June 2011 contains several typographical errors. The typos incorrectly reference the Arsenic Reduction Policy as section 4, rather than section 7. This error occurred during preparation of the final rule when the Arsenic Reduction Policy was moved from section 4 in the proposed rule to section 7 in the final toxics rule. In addition, there was an incorrect reference to a subsection. DEQ proposes to correct these errors.

3. 340-041-0009 Bacteria Rule

The Bacteria Rule references Table 20. Since Table 20 will be removed from the Toxic Substances rule, DEQ proposes to delete the reference and instead reference the Toxic Substances rule. DEQ proposes not to insert a specific table name (i.e. Table 30) into the Bacteria Rule to reduce citation corrections in the future if the table name changes again.

4. 340-040-0020 Groundwater Quality Protection

Table 20 is referenced in the Groundwater Quality Protection rules. Since Table 20 will be removed from the Toxic Substances rule, DEQ proposes to delete the reference and instead reference the Toxic Substances rule. DEQ proposes not to insert a specific table name (i.e. Table 30) into the Groundwater Quality Rule to reduce citation corrections in the future if the table name changes again.

Additionally, there is a citation in this rule to Division 41 which no longer exists. The correct reference should be to the same antidegradation policy described and referenced in OAR 340-040-0020; therefore DEQ proposes to delete the citation.

5. 340-040-0080 Numerical Groundwater Quality Reference Levels and Guidance Levels

Table 20 is referenced in the Numerical Groundwater Quality Reference Levels and Guidance Levels rules. Since Table 20 will be removed from the Toxic Substances rule, DEQ proposes to delete the reference and instead reference the Toxic Substances rule. DEQ proposes not to insert a specific table

name (i.e. Table 30) into this rule to reduce citation corrections in the future if the table name changes again.

Section 2: Proposed Rule Revisions to Divisions 40 and 41

1. 340-041-0033 Toxic Substances

(1) Amendments ~~underin this rule sections (4) and (6) of this rule (OAR 340-041-0033) and associated revisions to~~ will not be effective until approved by EPA. Tables 20, 33A, 33B and 40 do not become applicable for purposes of ORS chapter 468B or the federal Clean Water Act unless and until EPA approves the provisions it identifies as water quality standards pursuant to 40 CFR 131.21 (4/27/2000).

(2) **Toxic Substances Narrative.** Toxic substances may not be introduced above natural background levels in waters of the state in amounts, concentrations, or combinations that may be harmful, may chemically change to harmful forms in the environment, or may accumulate in sediments or bioaccumulate in aquatic life or wildlife to levels that adversely affect public health, safety, or welfare or aquatic life, wildlife, or other designated beneficial uses.

(3) **Aquatic Life Numeric Criteria.** Levels of toxic substances in waters of the state may not exceed the applicable aquatic life criteria listed in Table 30. ~~Tables 20, 33A, and 33B. Tables 33A and 33B, adopted on May 20, 2004, update Table 20 as described in this section.~~

~~(a) Each value for criteria in Table 20 is effective until the corresponding value in Tables 33A or 33B becomes effective.~~

~~(A) Each value in Table 33A is effective on February 15, 2005, unless EPA has disapproved the value before that date. If a value is subsequently disapproved, any corresponding value in Table 20 becomes effective immediately. Values that are the same in Tables 20 and 33A remain in effect.~~

~~(B) Each value in Table 33B is effective upon EPA approval.~~

~~(b) The department will note the effective date for each value in Tables 20, 33A, and 33B as described in this section.~~

(4) **Human Health Numeric Criteria.** The criteria for waters of the state listed in Table 40 are established to protect Oregonians from potential adverse health effects associated with long-term exposure to toxic substances associated with consumption of fish, shellfish, and water.

(5) To establish permit or other regulatory limits for toxic substances for which criteria are not included in Table 30 or Table 40s 20, 33A, or 33B, the department may use the guidance values in Table 33C, public health advisories, and other published scientific literature. The department may also require or conduct bio-assessment studies to monitor the toxicity to aquatic life of complex effluents, other suspected discharges, or chemical substances without numeric criteria.

(6) Establishing Site-Specific Background Pollutant Criteria:

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(7) Arsenic Reduction Policy:

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2. 340-041-0033(7) Arsenic Reduction Policy Rule Language

(7) Arsenic Reduction Policy: The inorganic arsenic criterion for the protection of human health from the combined consumption of organisms and drinking water is 2.1 micrograms per liter. While this criterion is protective of human health and more stringent than the federal maximum contaminant level (MCL) for arsenic in drinking water, which is 10 micrograms per liter, it nonetheless is based on a higher risk level than the Commission has used to establish other human health criteria. This higher risk level recognizes that much of the risk is due to naturally high levels of inorganic arsenic in Oregon's waterbodies. In order to maintain the lowest human health risk from inorganic arsenic in drinking water, the Commission has determined that it is appropriate to adopt the following policy to limit the human contribution to that risk.

(a) The arsenic reduction policy established by this rule section does not become applicable for purposes of ORS chapter 468B or the federal Clean Water Act unless and until the numeric arsenic criteria established by this rule are approved by EPA pursuant to 40 CFR 131.21 (4/27/2000).

(b) It is the policy of the Commission that the addition of inorganic arsenic from new or existing anthropogenic sources to waters of the state within a surface water drinking water protection area be reduced the maximum amount feasible. The requirements of this rule section (OAR 340-041-0033(47)) apply to sources that discharge to surface waters of the state with an ambient inorganic arsenic concentration equal to or lower than the applicable numeric inorganic arsenic criteria for the protection of human health.

(c) The following definitions apply to this section (OAR 340-041-0033(47)):

(A) "Add inorganic arsenic" means to discharge a net mass of inorganic arsenic from a point source (the mass of inorganic arsenic discharged minus the mass of inorganic arsenic taken into the facility from a surface water source).

(B) A "surface water drinking water protection area," for the purpose of this section, means an area delineated as such by DEQ under the source water assessment program of the federal Safe Drinking Water Act, 42 U.S.C. § 300j 13. The areas are delineated for the purpose of protecting public or community drinking water supplies that use surface water sources. These delineations can be found at DEQ's drinking water program website.

(C) "Potential to significantly increase inorganic arsenic concentrations in the public drinking water supply source water" means:

(i) to increase the concentration of inorganic arsenic in the receiving water for a discharge by 10 percent or more after mixing with the harmonic mean flow of the receiving water; or

(ii) as an alternative, if sufficient data are available, the discharge will increase the concentration of inorganic arsenic in the surface water intake water of a public water system by 0.021 micrograms per liter or more based on a mass balance calculation.

(d) Following the effective date of this rule, applications for an individual NPDES permit or permit renewal received from industrial dischargers located in a surface water drinking water protection area and identified by DEQ as likely to add inorganic arsenic to the receiving water must include sufficient data to enable DEQ to determine whether:

(A) The discharge in fact adds inorganic arsenic; and

(B) The discharge has the potential to significantly increase inorganic arsenic concentrations in the public drinking water supply source water.

(e) Where DEQ determines that both conditions in subsection (d) of this section (~~47~~) are true, the industrial discharger must develop an inorganic arsenic reduction plan and propose all feasible measures to reduce its inorganic arsenic loading to the receiving water. The proposed plan, including proposed measures, monitoring and reporting requirements, and a schedule for those actions, will be described in the fact sheet and incorporated into the source's NPDES permit after public comment and DEQ review and approval. In developing the plan, the source must:

(A) Identify how much it can minimize its inorganic arsenic discharge through pollution prevention measures, process changes, wastewater treatment, alternative water supply (for groundwater users) or other possible pollution prevention and/or control measures;

(B) Evaluate the costs, feasibility and environmental impacts of the potential inorganic arsenic reduction and control measures;

(C) Estimate the predicted reduction in inorganic arsenic and the reduced human health risk expected to result from the control measures;

(D) Propose specific inorganic arsenic reduction or control measures, if feasible, and an implementation schedule; and

(E) Propose monitoring and reporting requirements to document progress in plan implementation and the inorganic arsenic load reductions.

(f) In order to implement this section, DEQ will develop the following information and guidance within 120 days of the effective date of this rule and periodically update it as warranted by new information:

(A) A list of industrial sources or source categories, including industrial stormwater and sources covered by general permits, that are likely to add inorganic arsenic to surface waters of the State.

(i) For industrial sources or source categories permitted under a general permit that have been identified by DEQ as likely sources of inorganic arsenic, DEQ will evaluate options for reducing inorganic arsenic during permit renewal or evaluation of Stormwater Pollution Control Plans.

(B) Quantitation limits for monitoring inorganic arsenic concentrations.

(C) Information and guidance to assist sources in estimating, pursuant to ~~paragraph~~subsection (C) of this section, the reduced human health risk expected to result from inorganic arsenic control measures based on the most current EPA risk assessment.

(g) It is the policy of the Commission that landowners engaged in agricultural or development practices on land where pesticides, fertilizers, or soil amendments containing arsenic are currently being or have previously been applied, implement conservation practices to minimize the erosion and runoff of inorganic arsenic to waters of the State or to a location where such material could readily migrate into waters of the State.

[ED. NOTE: Tables referenced are not included in rule text. Click here for a PDF copy of Table 30: Aquatic Life Toxics Criteria. Click here for a PDF copy of Table 40: Human Health Toxics Criteria. Click here for a PDF copy of Table 33C: Water Quality Guidance Values Summary~~available from the agency.~~]

Stat. Auth.: ORS 468.020, 468B.030, 468B.035 & 468B.048

Stats. Implemented: ORS 468B.030, 468B.035 & 468B.048

Hist.: DEQ 17-2003, f. & cert. ef. 12-9-03; DEQ 3-2004, f. & cert. ef. 5-28-04; DEQ 17-2010, f. & cert. ef. 12-21-10; DEQ 8-2011, f. & cert. ef. 6-30-11; DEQ 10-2011, f. & cert. ef. 7-13-11

3. 340-041-0009 Bacteria

(1) Numeric Criteria: Organisms of the coliform group commonly associated with fecal sources (MPN or equivalent membrane filtration using a representative number of samples) may not exceed the criteria described in paragraphs (a) and (b) of this paragraph:

(a) Freshwaters and Estuarine Waters Other than Shellfish Growing Waters:

(A) A 30-day log mean of 126 E. coli organisms per 100 milliliters, based on a minimum of five (5) samples;

(B) No single sample may exceed 406 E. coli organisms per 100 milliliters.

(b) Marine Waters and Estuarine Shellfish Growing Waters: A fecal coliform median concentration of 14 organisms per 100 milliliters, with not more than ten percent of the samples exceeding 43 organisms per 100 ml.

(2) Raw Sewage Prohibition: No sewage may be discharged into or in any other manner be allowed to enter the waters of the State, unless such sewage has been treated in a manner approved by the Department or otherwise allowed by these rules;

(3) Animal Waste: Runoff contaminated with domesticated animal wastes must be minimized and treated to the maximum extent practicable before it is allowed to enter waters of the State;

(4) Bacterial pollution or other conditions deleterious to waters used for domestic purposes, livestock watering, irrigation, bathing, or shellfish propagation, or otherwise injurious to public health may not be allowed;

(5) Effluent Limitations for Bacteria: Except as allowed in subsection (c) of this section, upon NPDES permit renewal or issuance, or upon request for a permit modification by the permittee at an earlier date, effluent discharges to freshwaters, and estuarine waters other than shellfish growing waters may not exceed a monthly log mean of 126 E. coli organisms per 100 ml. No single sample may exceed 406 E. coli organisms per 100 ml. However, no violation will be found, for an exceedance if the permittee takes at least five consecutive re-samples at four-hour intervals beginning as soon as practicable (preferably within 28 hours) after the original sample was taken and the log mean of the five re-samples is less than or equal to 126 E. coli. The following conditions apply:

(a) If the Department finds that re-sampling within the timeframe outlined in this section would pose an undue hardship on a treatment facility, a more convenient schedule may be negotiated in the permit, provided that the permittee demonstrates that the sampling delay will result in no increase in the risk to water contact recreation in waters affected by the discharge;

(b) The ~~aquatic life criteria in-stream criterion~~ for chlorine established in the water quality toxic substances rule under OAR 340-041-0033 listed in Table 20 must be met at all times outside the assigned mixing zone;

(c) For sewage treatment plants that are authorized to use recycled water pursuant to OAR 340, division 55, and that also use a storage pond as a means to dechlorinate their effluent prior to discharge to public waters, effluent limitations for bacteria may, upon request by the permittee, be based upon appropriate total coliform limits as required by OAR 340, division 55:

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4. 340-040-0020 Groundwater Quality Protection General Policies

(1) Groundwater is a critical natural resource providing domestic, industrial, and agricultural water supply; and other legitimate beneficial uses; and also providing base flow for rivers, lakes, streams, and wetlands.

(2) Groundwater, once polluted, is difficult and sometimes impossible to clean up. Therefore, the EQC shall employ an anti-degradation policy to emphasize the prevention of groundwater pollution, and to control waste discharges to groundwater so that the highest possible water quality is maintained.

(3) All groundwaters of the state shall be protected from pollution that could impair existing or potential beneficial uses for which the natural water quality of the groundwater is adequate. Among the recognized beneficial uses of groundwater, domestic water supply is recognized as being the use that would usually require the highest level of water quality. Existing high quality groundwaters which exceed those levels necessary to support recognized and legitimate beneficial uses shall be maintained except as provided for in these rules.

(4) Numerical groundwater quality reference levels and guidance levels are listed in **Tables 1 through 3** of this Division. These levels have been obtained from the Safe Drinking Water Act, and indicate when groundwater may not be suitable for human consumption or when the aesthetic quality of groundwater may be impaired. They will be used by the Department and the public to evaluate the significance of a particular contaminant concentration, and will trigger necessary regulatory action. These levels should not be construed as acceptable groundwater quality goals because it is the policy of the EQC (~~OAR 340-041-0026(1)(a)~~) to maintain and preserve the highest possible water quality.

(5) For pollutant parameters for which numerical groundwater quality reference levels or guidance levels have not been established, or for evaluating adverse impacts on beneficial uses other than human consumption, the Department shall make use of the most current and scientifically valid information available in determining at what levels pollutants may affect present or potential beneficial uses. Such information shall include, but not be limited to, values set forth in OAR 340-041-0033 ~~Chapter 340, Division 41, Table 20.~~

(6) The Department shall develop, implement and conduct a comprehensive groundwater quality protection program. The program shall contain strategies and methods for problem prevention, problem abatement and the control of both point and nonpoint sources of groundwater pollution. The Department shall seek the assistance of federal, state, and local governments in implementing the program.

5. 340-040-0080 Numerical Groundwater Quality Reference Levels and Guidance Levels

(1) The numerical groundwater quality reference levels and guidance levels contained in **Tables 1 through 3** of this Division are to be considered by the Department and the public in weighing the significance of a particular chemical concentration, and in determining the level of remedial action necessary to restore contaminated groundwater for human consumption. They are not to be construed as acceptable groundwater quality management goals. They are to be used by the Director and the EQC in establishing permit-specific and remedial action concentration limits according to the requirements of OAR 340-040-0030 through 340-040-0060.

(2) The Department shall periodically review information as it becomes available for establishing new numerical groundwater quality reference levels and guidance levels, and to ensure consistency with other statutorily mandated standards.

(3) Human consumption is recognized as the highest and best use of groundwater, and the use which usually requires the highest level of water quality. The numerical groundwater quality reference levels listed in **Tables 1 and 2** of this Division reflect the suitability of groundwater for human consumption.

(4) The numerical groundwater quality guidance levels listed in **Table 3** of this Division are for contaminants which do not adversely impact human health at the given concentrations. At considerably higher concentrations, human health implications may exist. These guidance levels are for contaminants that primarily affect the aesthetic qualities relating to the public acceptance of drinking water. The aesthetic degradation of groundwater may impair its beneficial use.

(5) For pollutant parameters for which numerical ground-water quality reference levels or guidance levels have not been established and listed in **Tables 1 through 3**, or for evaluating adverse impacts on beneficial uses other than human consumption, the Department shall make use of the most current and



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scientifically valid information available in determining at what levels pollutants may affect present or potential beneficial uses. Such information shall include, but not be limited to, values set forth in OAR ~~340-041-0033~~ Chapter 340, Division 41, Table 20.