

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**DIVISION 41**

**WATER QUALITY STANDARDS: BENEFICIAL USES, POLICIES, AND CRITERIA FOR OREGON**

**340-041-0009**

**Bacteria**

(1) – (9).....

(10) Water Quality Limited for Bacteria: In those water bodies, or segments of water bodies identified by the Department as exceeding the relevant numeric criteria for bacteria in the basin standards and designated as water-quality limited under section 303(d) of the Clean Water Act, the requirements specified in section 11 of this rule and in OAR 340-041-0061(1~~1~~<sup>2</sup>) must apply.

(11)...

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 6-2008, f. & cert. ef. 5-5-08

**340-041-0007**

**Statewide Narrative Criteria**

(1) Notwithstanding the water quality standards contained in this Division, the highest and best practicable treatment and/or control of wastes, activities, and flows must in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels.

(2) Where a less stringent natural condition of a water of the State exceeds the numeric criteria set out in this Division, the natural condition supersedes the numeric criteria and becomes the standard for that water body. However, there are special restrictions, described in OAR 340-041-0004(9)(a)(D)(iii), that may apply to discharges that affect dissolved oxygen.

(3) For any new waste sources, alternatives that utilize reuse or disposal with no discharge to public waters must be given highest priority for use wherever practicable. New source discharges may be approved subject to the criteria in OAR 340-041-0004(9).

(4) No discharges of wastes to lakes or reservoirs may be allowed except as provided in section OAR 340-041-0004(9).

(5) Logging and forest management activities must be conducted in accordance with the Oregon rules established by the Environmental Quality Commission and must not cause violation of water quality standards. Nonpoint sources of pollution from forest operations on state and private forest lands are subject to best management practices and other control measures established by the Oregon Board of Forestry as provided in ORS 527.765 and 527.770. Forest ~~Practices~~ operations conducted in good faith compliance with best management practices and control measures established under the Forest Practice Act to minimize adverse effects on water quality are generally deemed not to cause violations of water quality standards as provided in ORS 527.770. Forest operations are subject to load allocations established under ORS 468B.110 and OAR Division 340-042 to the extent needed to implement the federal Clean Water Act.

(6) Log handling in public waters must conform to current Commission policies and guidelines.

(7) Sand and gravel removal operations must be conducted pursuant to a permit from the Division of State Lands and separated from the active flowing stream by a watertight berm wherever physically practicable. Recirculation and reuse of process water must be required wherever practicable. Discharges or seepage or leakage losses to public waters may not cause a violation of water quality standards or adversely affect legitimate beneficial uses.

(8) Road building and maintenance activities must be conducted in a manner so as to keep waste materials out of public waters and minimize erosion of cut banks, fills, and road surfaces.

(9) In order to improve controls over nonpoint sources of pollution, federal, State, and local resource management agencies will be encouraged and assisted to coordinate planning and implementation of programs to regulate or control runoff, erosion, turbidity, stream temperature, stream flow, and the withdrawal and use of irrigation water on a basin-wide approach so as to protect the quality and beneficial uses of water and related resources. Such programs may include, but not be limited to, the following:

(a) Development of projects for storage and release of suitable quality waters to augment low stream flow;

(b) Urban runoff control to reduce erosion;

(c) Possible modification of irrigation practices to reduce or minimize adverse impacts from irrigation return flows;

(d) Stream bank erosion reduction projects; and

(e) Federal water quality restoration plans.

(10) The development of fungi or other growths having a deleterious effect on stream bottoms, fish or other aquatic life, or that are injurious to health, recreation, or industry may not be allowed;

(11) The creation of tastes or odors or toxic or other conditions that are deleterious to fish or other aquatic life or affect the potability of drinking water or the palatability of fish or shellfish may not be allowed;

(12) The formation of appreciable bottom or sludge deposits or the formation of any organic or inorganic deposits deleterious to fish or other aquatic life or injurious to public health, recreation, or industry may not be allowed;

(13) Objectionable discoloration, scum, oily sheens, or floating solids, or coating of aquatic life with oil films may not be allowed;

(14) Aesthetic conditions offensive to the human senses of sight, taste, smell, or touch may not be allowed;

(15) Radioisotope concentrations may not exceed maximum permissible concentrations (MPC's) in drinking water, edible fishes or shellfishes, wildlife, irrigated crops, livestock and dairy products, or pose an external radiation hazard;

(16) Minimum Design Criteria for Treatment and Control of Wastes. Except as provided in OAR 340-041-0101 through 340-041-0350, and subject to the implementation requirements set forth in OAR 340-041-0061, prior to discharge of any wastes from any new or modified facility to any waters of the State, such wastes must be treated and controlled in facilities designed in accordance with the following minimum criteria.

(a) In designing treatment facilities, average conditions and a normal range of variability are generally used in establishing design criteria. A facility once completed and placed in operation should operate at or near the design limit most of the time but may operate below the design criteria limit at times due to variables which are unpredictable or uncontrollable. This is particularly true for biological treatment facilities. The actual operating limits are intended to be established by permit pursuant to ORS 468.740 and recognize that the actual performance level may at times be less than the design criteria.

(A) Sewage wastes:

(i) Effluent BOD concentrations in mg/l, divided by the dilution factor (ratio of receiving stream flow to effluent flow) may not exceed one unless otherwise approved by the Commission;

(ii) Sewage wastes must be disinfected, after treatment, equivalent to thorough mixing with sufficient chlorine to provide a residual of at least 1 part per million after 60 minutes of contact time unless otherwise specifically authorized by permit;

(iii) Positive protection must be provided to prevent bypassing raw or inadequately treated sewage to public waters unless otherwise approved by the Department where elimination of inflow and infiltration would be necessary but not presently practicable; and

(iv) More stringent waste treatment and control requirements may be imposed where special conditions make such action appropriate.

(B) Industrial wastes:

(i) After maximum practicable in-plant control, a minimum of secondary treatment or equivalent control (reduction of suspended solids and organic material where present in significant quantities, effective disinfection where bacterial organisms of public health significance are present, and control of toxic or other deleterious substances);

(ii) Specific industrial waste treatment requirements may be determined on an individual basis in accordance with the provisions of this plan, applicable federal requirements, and the following:

(I) The uses that are or may likely be made of the receiving stream;

(II) The size and nature of flow of the receiving stream;

(III) The quantity and quality of wastes to be treated; and

(IV) The presence or absence of other sources of pollution on the same watershed.

(iii) Where industrial, commercial, or agricultural effluents contain significant quantities of potentially toxic elements, treatment requirements may be determined utilizing appropriate bioassays;

(iv) Industrial cooling waters containing significant heat loads must be subjected to off-stream cooling or heat recovery prior to discharge to public waters;

(v) Positive protection must be provided to prevent bypassing of raw or inadequately treated industrial wastes to any public waters;

(vi) Facilities must be provided to prevent and contain spills of potentially toxic or hazardous materials.

## Toxic Substances

(1) Amendments to sections (4) and (6) of this rule (OAR 340-041-0033) and associated revisions to 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).

(42) 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.

(23) Aquatic Life Criteria. Levels of toxic substances in waters of the state may not exceed the applicable aquatic life criteria listed in 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 arsenic criteria in Table 20 established by this rule do not become applicable for purposes of ORS chapter 468B or the federal Clean Water Act unless and until they are approved by EPA pursuant to 40 CFR 131.21 (4/27/2000).~~

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

~~(3) To establish permit or other regulatory limits for toxic substances for which criteria are not included in Tables 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.~~

~~(4) 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(4)] 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(4)]:~~

~~(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 (4) 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 (d) (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.~~

(4) Human Health 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.

~~(35) To establish permit or other regulatory limits for toxic substances for which criteria are not included in Tables 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: This provision is a performance based water quality standard that results in site-specific human health water quality criteria under the conditions and procedures specified in this rule section. It addresses existing permitted discharges of a pollutant removed from the same

body of water. For waterbodies where a discharge does not increase the pollutant's mass and does not increase the pollutant concentration by more than 3%, and where the water body meets a pollutant concentration associated with a risk level of  $1 \times 10^{-4}$ , DEQ concludes that the pollutant concentration continues to protect human health.  
(a) Definitions: For the purpose of this section [OAR 340-041-0033(6)]:

(A) "Background pollutant concentration" means the ambient water body concentration immediately upstream of the discharge, regardless of whether those pollutants are natural or result from upstream human activity.

(B) An "intake pollutant" is the amount of a pollutant that is present in public waters (including groundwater) as provided in subsection (C), below, at the time it is withdrawn from such waters by the discharger or other facility supplying the discharger with intake water.

(C) "Same body of water": An intake pollutant is considered to be from the "same body of water" as the discharge if the department finds that the intake pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee. This finding may be deemed established if:

(i) The background concentration of the pollutant in the receiving water (excluding any amount of the pollutant in the facility's discharge) is similar to that in the intake water;

(ii) There is a direct hydrological connection between the intake and discharge points; and

(I) The department may also consider other site-specific factors relevant to the transport and fate of the pollutant to make the finding in a particular case that a pollutant would or would not have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee.

(II) An intake pollutant from groundwater may be considered to be from the "same body of water" if the department determines that the pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee, except that such a pollutant is not from the same body of water if the groundwater contains the pollutant partially or entirely due to past or present human activity, such as industrial, commercial, or municipal operations, disposal actions, or treatment processes.

(iii) Water quality characteristics (e.g., temperature, pH, hardness) are similar in the intake and receiving waters.

(b) Applicability

(A) Site-specific criteria may be established under this rule section only for carcinogenic pollutants.

(B) Site-specific criteria established under this rule section apply in the vicinity of the discharge for purposes of establishing permit limits for the specified permittee.

(C) The underlying waterbody criteria continue to apply for all other Clean Water Act programs.

(D) The site-specific background pollutant criterion will be effective upon department issuance of the permit for the specified permittee.



(E) Any site-specific criteria developed under this procedure will be re-evaluated upon permit renewal.

(c) A site-specific background pollutant criterion may be established where all of the following conditions are met:

(A) The discharger has a currently effective NPDES permit;

(B) The mass of the pollutant discharged to the receiving waterbody does not exceed the mass of the intake pollutant from the same body of water, as defined in section 6(a)(C) above, and, therefore, does not increase the total mass load of the pollutant in the receiving water body;

(C) The discharger has not been assigned a TMDL wasteload allocation for the pollutant in question;

(D) The permittee uses any feasible pollutant reduction measures available and known to minimize the pollutant concentration in their discharge;

(E) The pollutant discharge has not been chemically or physically altered in a manner that causes adverse water quality impacts that would not occur if the intake pollutants were left in-stream; and,

(F) The timing and location of the pollutant discharge would not cause adverse water quality impacts that would not occur if the intake pollutant were left in-stream.

(d) The site-specific background pollutant criterion must be the most conservative of the following four values. The procedures deriving these values are described in the sections (6)(e) of this rule.

(A) The projected in-stream pollutant concentration resulting from the current discharge concentration and any feasible pollutant reduction measures under (c)(D) above, after mixing with the receiving stream.

(B) The projected in-stream pollutant concentration resulting from the portion of the current discharge concentration associated with the intake pollutant mass after mixing with the receiving stream. This analysis ensures that there will be no increase in the mass of the intake pollutant in the receiving water body as required by condition (c)(B) above.

(C) The projected in-stream pollutant concentration associated with a 3% increase above the background pollutant concentration as calculated:

(i) For the mainstem Willamette and Columbia Rivers, using 25% of the harmonic mean flow of the waterbody.

(ii) For all other waters, using 100% of the harmonic mean flow or similar critical flow value of the waterbody.

(D) A criterion concentration value representing a human health risk level of  $1 \times 10^{-4}$ . This value is calculated using EPA's human health criteria derivation equation for carcinogens (EPA 2000), a risk level of  $1 \times 10^{-4}$ , and the same values for the remaining calculation variables that were used to derive the underlying human health criterion.

(e) Procedure to derive a site-specific human health water quality criterion to address a background pollutant:

(A) The department will develop a flow-weighted characterization of the relevant flows and pollutant concentrations of the receiving waterbody, effluent and all facility intake pollutant sources to determine the fate and transport of the pollutant mass.

(i) The pollutant mass in the effluent discharged to a receiving waterbody may not exceed the mass of the intake pollutant from the same body of water.

(ii) Where a facility discharges intake pollutants from multiple sources that originate from the receiving waterbody and from other waterbodies, the department will calculate the flow-weighted amount of each source of the pollutant in the characterization.

(iii) Where intake water for a facility is provided by a municipal water supply system and the supplier provides treatment of the raw water that removes an intake water pollutant, the concentration and mass of the intake water pollutant shall be determined at the point where the water enters the water supplier's distribution system.

(B) Using the flow weighted characterization developed in Section (6)(e)(A), the department will calculate the in-stream pollutant concentration following mixing of the discharge into the receiving water. The resultant concentration will be used to determine the conditions in Section (6)(d)(A) and (B).

(C) Using the flow weighted characterization, the department will calculate the in-stream pollutant concentration based on an increase of 3% above background pollutant concentration. The resultant concentration will be used to determine the condition in Section (6)(d)(C).

(i) For the mainstem Willamette and Columbia Rivers, 25% of the harmonic mean flow of the waterbody will be used.

(ii) For all other waters, 100% of the harmonic mean flow or similar critical flow value of the waterbody will be used.

(D) The department will select the most conservative of the following values as the site-specific water quality criterion.

(i) The projected in-stream pollutant concentration described in Section 6(e)(B);

(ii) The in-stream pollutant concentration based on an increase of 3% above background described in Section 6(e)(C); or

(iii) A water quality criterion based on a risk level of  $1 \times 10^{-4}$ .

(f) Calculation of water quality based effluent limits based on a site-specific background pollutant criterion:

(A) For discharges to receiving waters with a site-specific background pollutant criterion, the department will use the site-specific criterion in the calculation of a numeric water quality based effluent limit.

(B) The department will compare the calculated water quality based effluent limits to any applicable aquatic toxicity or technology based effluent limits and select the most conservative for inclusion in the permit conditions.

(g) In addition to the water quality based effluent limits described in Section (6)(f), the department will calculate a mass-based limit where necessary to ensure that the condition described in Section (6)(c)(B) is met. Where

mass-based limits are included, the permit shall specify how compliance with mass-based effluent limitations will be assessed.

(h) The permit shall include a provision requiring the department to consider the re-opening of the permit and re-evaluation of the site-specific background pollutant criterion if new information shows the discharger no longer meets the conditions described in subsections (6)(c) and (e).

(i) Public Notification Requirements.

(A) If the department proposes to grant a site-specific background pollutant criterion, it must provide public notice of the proposal and hold a public hearing. The public notice may be included in the public notification of a draft NPDES permit or other draft regulatory decision that would rely on the criterion and will also be published on the water quality standards website;

(B) The department will publish a list of all site-specific background pollutant criteria approved pursuant to this rule. A criterion will be added to this list within 30 days of its effective date. The list will identify: the permittee; the site-specific background pollutant criterion and the associated risk level; the waterbody to which the criterion applies; the allowable pollutant effluent limit; and how to obtain additional information about the criterion.

(47) 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(4)] 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(4)]:

(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 (4) 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 (d) (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 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

**OAR 340-041-0059**

**Variances**

This rule (OAR 340-041-0059) does 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).

(1) Applicability. Subject to the requirements and limitations set out in sections (2) through (7) below, a point source may request a water quality standards variance where it is demonstrated that the source cannot feasibly meet effluent limits sufficient to meet water quality standards. The director of the department will determine whether to issue a variance for a source covered by an existing NPDES permit. The commission will determine whether to issue a variance for a discharger that does not have a currently effective NPDES permit.

(a) The variance applies only to the specified point source permit and pollutant(s); the underlying water quality standard(s) otherwise remains in effect.

(b) The department or commission may not grant a variance if:

(A) The effluent limit sufficient to meet the underlying water quality standard can be attained by implementing technology-based effluent limits required under sections 301(b) and 306 of the federal Clean Water Act, and by implementing cost-effective and reasonable best management practices for nonpoint sources under the control of the discharger; or

(B) The variance would likely jeopardize the continued existence of any threatened or endangered species listed under section 4 of the Endangered Species Act or result in the destruction or adverse modification of such species' critical habitat; or

(C) The conditions allowed by the variance would result in an unreasonable risk to human health; or

(D) A point source does not have a currently effective NPDES permit, unless the variance is necessary to:

- (i) Prevent or mitigate a threat to public health or welfare;
- (ii) Allow a water quality or habitat restoration project that may cause short term water quality standards exceedances, but will result in long term water quality or habitat improvement that enhances the support of aquatic life uses;
- (iii) Provide benefits that outweigh the environmental costs of lowering water quality. This analysis is comparable to that required under the antidegradation regulation contained in OAR-041-0004(6)(b); or

(E) The information and demonstration submitted in accordance with section (4) below does not allow the department or commission to conclude that a condition in section (2) has been met.

(2) Conditions to Grant a Variance. Before the commission or department may grant a variance, it must determine that:

(a) No existing use will be impaired or removed as a result of granting the variance and

(b) Attaining the water quality standard during the term of the variance is not feasible for one or more of the following reasons:

(A) Naturally occurring pollutant concentrations prevent the attainment of the use;

(B) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges to enable uses to be met without violating state water conservation requirements;

(C) Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;

(D) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way which would result in the attainment of the use;

(E) Physical conditions related to the natural features of the waterbody, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and unrelated to water quality preclude attainment of aquatic life protection uses; or

(F) Controls more stringent than those required by sections 301(b) and 306 of the federal Clean Water Act would result in substantial and widespread economic and social impact.

(3) Variance Duration.

(a) The duration of a variance must not exceed the term of the NPDES permit. If the permit is administratively extended, the permit effluent limits and any other requirements based on the variance and associated pollutant reduction plan will continue to be in effect during the period of the administrative extension. The department will give priority to NPDES permit renewals for permits containing variances and where a renewal application has been submitted to the director at least one hundred eighty days prior to the NPDES permit expiration date.

(b) When the duration of the variance is less than the term of a NPDES permit, the permittee must be in compliance with the specified effluent limitation sufficient to meet the underlying water quality standard upon the expiration of the variance.

(c) A variance is effective only after EPA approval. The effective date and duration of the variance will be specified in a NPDES permit or order of the commission or department.

(4) Variance Submittal Requirements. To request a variance, a permittee must submit the following information to the department:

(a) A demonstration that attaining the water quality standard for a specific pollutant is not feasible for the requested duration of the variance based on one or more of the conditions found in section (2)(b) of this rule;

(b) A description of treatment or alternative options considered to meet limits based on the applicable underlying water quality standard, and a description of why these options are not technically, economically, or otherwise feasible;

(c) Sufficient water quality data and analyses to characterize ambient and discharge water pollutant concentrations;

(d) Any cost-effective and reasonable best management practices for nonpoint sources under the control of the discharger that addresses the pollutant the variance is based upon;

(e) A proposed pollutant reduction plan that includes any actions to be taken by the permittee that would result in reasonable progress toward meeting the underlying water quality standard. Such actions may include proposed pollutant offsets or trading or other proposed pollutant reduction activities, and associated milestones for implementing these measures. Pollutant reduction plans will be tailored to address the specific circumstances of each facility and to the extent pollutant reduction can be achieved; and

(f) If the discharger is a publicly owned treatment works, a demonstration of the jurisdiction's legal authority (such as a sewer use ordinance) to regulate the pollutant for which the variance is sought. The jurisdiction's legal authority must be sufficient to control potential sources of that pollutant that discharge into the jurisdiction's sewer collection system.

(5) Variance Permit Conditions. Effluent limits in the discharger's permit will be based on the variance and not the underlying water quality standard, so long as the variance remains effective. The department must establish and incorporate into the discharger's NPDES permit all conditions necessary to implement and enforce an approved variance and associated pollutant reduction plan. The permit must include, at a minimum, the following requirements:

(a) An interim concentration based permit limit or requirement representing the best achievable effluent quality based on discharge monitoring data and that is no less stringent than that achieved under the previous permit. For a new discharger, the permit limit will be calculated based on best achievable technology;

(b) A requirement to implement any pollutant reduction actions approved as part of a pollutant reduction plan submitted in accordance with section (4)(e) above and to make reasonable progress toward attaining the underlying water quality standard(s);

(c) Any studies, effluent monitoring, or other monitoring necessary to ensure compliance with the conditions of the variance; and

(d) An annual progress report to the department describing the results of any required studies or monitoring during the reporting year and identifying any impediments to reaching any specific milestones stated in the variance.

(6) Public Notification Requirements.

(a) If the department proposes to grant a variance, it must provide public notice of the proposal and hold a public hearing. The public notice may be included in the public notification of a draft NPDES permit or other draft regulatory decision that would rely on the variance;



(b) The department will publish a list of all variances approved pursuant to this rule. Newly approved variances will be added to this list within 30 days of their effective date. The list will identify: the discharger; the underlying water quality standard addressed by the variance; the waters of the state to which the variance applies; the effective date and duration of the variance; the allowable pollutant effluent limit granted under the variance; and how to obtain additional information about the variance.

(7) Variance Renewals.

(a) A variance may be renewed if:

(A) The permittee makes a renewed demonstration pursuant to section (2) of this rule that attaining the water quality standard continues to be infeasible.

(B) The permittee submits any new or updated information pertaining to any of the requirements of section 4,

(C) The department determines that all conditions and requirements of the previous variance and actions contained in the pollutant reduction plan pursuant to section (5) have been met, unless reasons outside the control of the discharger prevented meeting any condition or requirement, and

(D) All other requirements of this rule have been met.

(b) A variance renewal must be approved by the department director and by EPA.

### Other Implementation of Water Quality Criteria

(1) A waste treatment and disposal facility may not be constructed or operated and wastes may not be discharged to public waters without a permit from the department in accordance with ORS 468B.050.

~~(2) Water quality variances. The commission may grant point source variances from the water quality standards in this Division where the following requirements are met.~~

~~(a) The water quality variance may apply only to the point source for which the variance is requested and only to the pollutant or pollutants specified in the variance; the underlying water quality standard otherwise remains in effect.~~

~~(b) A water quality standard variance may not be granted if:~~

~~(A) Standards will be attained by all point source dischargers implementing effluent limitations required under sections 301(b) and 306 of the federal Clean Water Act and by nonpoint sources implementing cost effective and reasonable best management practices; or~~

~~(B) The variance would likely jeopardize the continued existence of any threatened or endangered species listed under section 4 of the Endangered Species Act or result in the destruction or adverse modification of such species' critical habitat.~~

~~(c) Before a variance is granted, the applicant must demonstrate that attaining the water quality standard is not feasible for one of the following reasons:~~

~~(A) Naturally occurring pollutant concentrations prevent the attainment of the use.~~

~~(B) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges to enable uses to be met without violating state water conservation requirements.~~

~~(C) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place.~~

~~(D) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way which would result in the attainment of the use.~~

~~(E) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and unrelated to water quality preclude attainment of aquatic life protection uses.~~

~~(F) Controls more stringent than those required by sections 301(b) and 306 of the federal Clean Water Act would result in substantial and widespread economic and social impact.~~

~~(d) Procedures. An applicant for a water quality standards variance must submit a request for a variance to the department. The application must include all relevant information showing that the requirements for a variance have been satisfied. The burden is on the applicant to demonstrate that the designated use is unattainable for one~~

~~of the reasons specified in subsection (c) of this section. If the department preliminarily determines that grounds exist for granting a variance, it must provide public notice of the proposed variance and an opportunity for public comment.~~

~~(A) The department may condition the variance on the performance of additional studies, monitoring, management practices, and other controls deemed necessary. These terms and conditions will be incorporated into the applicant's NPDES permit or department order.~~

~~(B) A variance may not exceed three years or the term of the NPDES permit, whichever is less. A variance may be renewed if the applicant reapplies and demonstrates that the use in question is still not attainable. Renewal of the variance may be denied if the applicant does not comply with the conditions of the original variance or otherwise does not meet the requirements of this section.~~

~~(C) DEQ approval of a variance for a point source is not effective under the federal Clean Water Act until submitted to and approved by EPA.~~

(32) Plans for all sewage and industrial waste treatment, control, and disposal facilities must be submitted to the department for review and approval prior to construction as required by ORS 468B.055.

(43) Minimum design criteria for waste treatment and control facilities prescribed under this plan and other waste treatment and controls deemed necessary to ensure compliance with the water quality standards contained in this plan must be provided in accordance with specific permit conditions for those sources or activities for which permits are required and the following implementation program.

(a) For new or expanded waste loads or activities, fully approved treatment or control facilities, or both, must be provided prior to discharge of any wastes from the new or expanded facilities or conduct of the new or expanded activity.

(b) For existing waste loads or activities, additional treatment or control facilities necessary to correct specific unacceptable water quality conditions must be provided in accordance with a specific program and timetable incorporated into the waste discharge permit for the individual discharger or activity. In developing treatment requirements and implementation schedules for existing installations or activities, consideration will be given to the impact upon the overall environmental quality, including air, water, land use, and aesthetics.

(c) Wherever minimum design criteria for waste treatment and control facilities set forth in this plan are more stringent than applicable federal standards and treatment levels currently being provided, upgrading to the more stringent requirements will be deferred until it is necessary to expand or otherwise modify or replace the existing treatment facilities. Such deferral will be acknowledged in the permit for the source.

(d) Where planning, design, or construction of new or modified waste treatment and controls to meet prior applicable state or federal requirements is underway at the time this plan is adopted, such plans, design, or construction may be completed under the requirements in effect when the project was initiated. Upgrading to meet more stringent future requirements will be timed in accordance with section (3) of this rule.

(54) Confined animal feeding operations (CAFOs) are regulated under OAR 340-051-0005 through 340-051-0080 to minimize potential adverse effect on water quality (see also OAR 603-074-0005 through 603-074-0070).

(65) Programs for control of pollution from nonpoint sources when developed by the department or by other agencies pursuant to section 208 of the federal Clean Water Act and approved by the department will be

incorporated into this plan by amendment via the same process used to adopt the plan unless other procedures are established by law.

(76) Where minimum requirements of federal law or enforceable regulations are more stringent than specific provisions of this plan, the federal requirements will prevail.

(87) Within the framework of statewide priorities and available resources, the department will monitor water quality within the basin for the purposes of evaluating conformance with the plan and developing information for additions or updates.

(98) The commission recognizes that the potential exists for conflicts between water quality management plans and the land use plans and resource management plans that local governments and other agencies are required to develop. If conflicts develop, the department will meet with the local governments or responsible agencies to resolve the conflicts. Revisions will be presented for adoption via the same process used to adopt the plan unless other specific procedures are established by law.

(409) The department will calculate and include effluent limits specified in pounds per day, which will be the mass load limits for biochemical oxygen demand or carbonaceous biochemical oxygen demand and total suspended solids in National Pollutant Discharge Elimination System permits issued to all sewage treatment facilities. These limits must be calculated as follows.

(a) Except as noted in paragraph (H) of this subsection, the following requirements apply to existing facilities and to facilities receiving departmental approval for engineering plans and specifications for new treatment facilities or treatment facilities expanding the average dry weather treatment capacity before June 30, 1992:

(A) During periods of low stream flows (approximately May 1 through October 31), the monthly average mass load expressed as pounds per day may not exceed the applicable monthly concentration effluent limit times the design average dry weather flow expressed in million gallons per day times 8.34. The weekly average mass load expressed as pounds per day may not exceed the monthly average mass load times 1.5. The daily mass load expressed in pounds per day may not exceed the monthly average mass load times 2.0.

(B) During the period of high stream flows (approximately November 1 through April 30), the monthly average mass load expressed as pounds per day may not exceed the monthly concentration effluent limit times the design average wet weather flow expressed in million gallons per day times 8.34. The weekly average mass load expressed as pounds per day may not exceed the monthly average mass load times 1.5. The daily mass load expressed in pounds per day may not exceed the monthly average mass load times 2.0.

(C) On any day that the daily flow to a sewage treatment facility exceeds the lesser hydraulic capacity of the secondary treatment portion of the facility or twice the design average dry weather flow, the daily mass load limit does not apply. The permittee must operate the treatment facility at highest and best practicable treatment and control.

(D) The design average wet weather flow used in calculating mass loads must be approved by the department in accordance with prudent engineering practice and must be based on a facility plan approved by the department, engineering plans and specifications approved by the department, or an engineering evaluation. The permittee must submit documentation describing and supporting the design average wet weather flow with the permit application, application for permit renewal, or modification request or upon request by the department. The design average wet weather flow is defined as the average flow between November 1 and April 30 when the sewage treatment facility is projected to be at design capacity for that portion of the year.

(E) Mass loads assigned as described in paragraphs (B) and (C) of this subsection will not be subject to OAR 340-041-0004(97);

(F) Mass loads as described in this rule will be included in permits upon renewal or upon a request for permit modification.

(G) Within 180 days after permit renewal or modification, a permittee receiving higher mass loads under this rule and having a separate sanitary sewer system must submit to the department for review and approval a proposed program and time schedule for identifying and reducing inflow. The program must include the following:

(i) Identification of all overflow points and verification that sewer system overflows are not occurring up to a 24-hour, five-year storm event or equivalent;

(ii) Monitoring of all pump station overflow points;

(iii) A program for identifying and removing all inflow sources into the permit holder's sewer system over which the permit holder has legal control; and

(iv) For those permit holders not having the necessary legal authority for all portions of the sewer system discharging into the permit holder's sewer system or treatment facility, a program and schedule for gaining legal authority to require inflow reduction and a program and schedule for removing inflow sources.

(H) Within one year after the department's approval of the program, the permit holder must begin implementation of the program.

(I) Paragraphs (A) through (G) of this subsection do not apply to the cities of Athena, Elgin, Adair Village, Halsey, Harrisburg, Independence, Carlton, and Sweet Home. Mass load limits have been individually assigned to these facilities.

(b) For new sewage treatment facilities or treatment facilities expanding the average dry weather treatment capacity and receiving engineering plans and specifications approval from the department after June 30, 1992, the mass load limits must be calculated by the department based on the proposed treatment facility capabilities and the highest and best practicable treatment to minimize the discharge of pollutants.

(c) Mass load limits as defined in this rule may be replaced by more stringent limits if required by waste load allocations established in accordance with a TMDL for treatment facilities discharging to water quality limited streams or if required to prevent or eliminate violations of water quality standards.

(d) If the design average wet weather flow or the hydraulic secondary treatment capacity is not known or has not been approved by the department at the time of permit issuance, the permit must include as interim mass load limits the mass load limits in the previous permit issued to the permit holder for the treatment facility. The permit must also include a requirement that the permit holder submit to the department the design average wet weather flow and hydraulic secondary treatment capacity within 12 months after permit issuance. Upon review and approval of the design flow information, the department will modify the permit and include mass load limits as described in subsection (a) of this section.

(e) Each permit holder with existing sewage treatment facilities otherwise subject to subsection (a) of this section may choose mass load limits calculated as follows:

(A) The monthly average mass load expressed as pounds per day may not exceed the applicable monthly concentration effluent limit times the design average dry weather flow expressed in million gallons per day times 8.34 pounds per gallon.

(B) The weekly average mass load expressed as pounds per day may not exceed the monthly average mass load times 1.5.

(C) The daily mass load expressed in pounds per day may not exceed the monthly average mass load times 2.0. If existing mass load limits are retained by the permit holder, the terms and requirements of subsection (a) of this section do not apply.

(f) The commission may grant exceptions to subsection (a) of this section. In allowing increased discharged loads, the commission must make the findings specified in OAR 340-041-0004(9)(a) for waste loads and the following findings:

(A) Mass loads calculated in subsection (a) of this section cannot be achieved with the existing treatment facilities operated at maximum efficiency at projected design flows; and

(B) There are no practicable alternatives to achieving the mass loads as calculated in subsection (a) of this section.

~~(10)~~ (10) Forestry on state and private lands. ~~For~~ Nonpoint sources of pollution from forest operations on state or private lands, ~~water quality standards are intended to be attained and are implemented through~~ subject to best management practices and other control ~~mechanisms~~ measures established under the Forest Practices Act (ORS 527.610 to 527.992) and rules thereunder, administered by the Oregon Department of Forestry. ~~Therefore,~~ under the Forest Practices Act. (ORS 527.610 to 527.992) Such forest operations ~~that are~~ when conducted in good faith compliance with the Forest Practices Act requirements are ~~(except for the limits set out in ORS 527.770) deemed in compliance with this division. DEQ will work with the Oregon Department of Forestry to revise the Forest Practices program to attain water quality standards.~~ generally deemed not to cause violations of water quality standards as provided in ORS 527.770. Forest operations on state and private lands are subject to load allocations under ORS 468.110 and OAR 340, Division 42, to the extent necessary to implement the federal Clean Water Act.

~~(11)~~ (11) Agricultural water quality management plans to reduce agricultural nonpoint source pollution are developed and implemented by the Oregon Department of Agriculture (ODA) through a cooperative agreement with the department to implement applicable provisions of ORS 568.900 to 568.933 and 561.191. ~~If the department has reason to believe that agricultural discharges or activities are contributing to water quality problems resulting in water quality standards violations, the department may consult with the ODA. If water quality impacts are likely from agricultural sources and the department determines that a water quality management plan is necessary, the director may write a letter to the director of the ODA requesting that such a management plan be prepared and implemented to reduce pollutant loads and achieve the water quality criteria.~~ In areas subject to the Agricultural Water Quality Management Act, the Oregon Department of Agriculture (ODA) under ORS 568.900 to 568.933 and 561.191 develops and implements agricultural water quality management area plans and rules to prevent and control water pollution from agricultural activities and soil erosion on agricultural and rural lands. Area plans and rules must be designed to achieve and maintain water quality standards. If the department determines that the area plan and rules are not adequate to achieve and maintain water quality standards, the department will provide ODA with comments on what would be sufficient to meet WQS or TMDL load allocations. If a resolution cannot be agreed upon, the department will request the Environmental Quality Commission (EQC) to petition ODA for a review of part or all of water quality management area plan and rules.

If a person subject to an ODA area plan and implementing rules causes or contributes to water quality standards violations, the department will refer the activity to ODA for further evaluation and potential requirements.

(~~13~~<sup>12</sup>) Agriculture and forestry on federal lands. Agriculture and forestry activities conducted on federal land must meet the requirements of this division and are subject to the department's jurisdiction. Pursuant to Memoranda of Agreement with the U.S. Forest Service and the Bureau of Land Management, water quality standards are expected to be met through the development and implementation of water quality restoration plans, best management practices, and aquatic conservation strategies. Where the department designates a federal agency as a designated management agency, implementation of these plans, practices, and strategies is deemed compliance with this division.

(~~14~~<sup>13</sup>) Testing methods. The analytical testing methods for determining compliance with the water quality standards in this rule must comply with 40 CFR Part 136 or, if Part 136 does not prescribe a method, with the most recent edition of Standard Methods for the Examination of Water and Waste Water published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation; if the department has published an applicable superseding method, testing must comply with the superseding method. Testing in accordance with an alternative method must comply with this rule if the department has published the method or has approved the method in writing.

(~~15~~<sup>14</sup>) Reservoirs or managed lakes are deemed in compliance with water quality criteria for temperature, pH, or dissolved oxygen (DO) if all of the following circumstances exist.

- (a) The water body has thermally stratified naturally or due to the presence of an impoundment.
- (b) The water body has three observable layers, defined as the epilimnion, metalimnion, and hypolimnion.
- (c) A layer exists in the reservoir or managed lake in which temperature, pH, and DO criteria are all met, and the layer is sufficient to support beneficial uses.
- (d) All practicable measures have been taken by the entities responsible for management of the reservoir or managed lake to maximize the layers meeting the temperature, pH, and DO criteria.
- (e) One of the following conditions is met:
  - (A) The streams or river segments immediately downstream of the water body meet applicable criteria for temperature, pH, and DO.
  - (B) All practicable measures have been taken to maximize downstream water quality potential and fish passage.
  - (C) If the applicable criteria are not met in the stream or river segment immediately upstream of the water body, then no further measurable downstream degradation of water quality has taken place due to stratification of the reservoir or managed lake.

(~~16~~<sup>15</sup>) Compliance schedules. In a permit issued under OAR 340, division 045 or in a water quality certification under OAR 340, division 48, the department may include compliance schedules for the implementation of effluent limits derived from water quality criteria in this division. A compliance schedule in an NPDES permit is allowed only for water quality based effluent limits that are newly applicable to the permit and must comply with provisions in 40 CFR §122.47 (including the requirement that water quality criteria must be achieved as soon as possible).

Attachment A2  
June 15-17, 2011, EQC meeting  
Page 24 of 34

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



**DIVISION 42**

**TOTAL MAXIMUM DAILY LOADS (TMDLS)**

**340-042-0040**

**Establishing Total Maximum Daily Loads (TMDLs)**

- (1) The Department will establish TMDLs for pollutants in waters of the state that are listed in accordance with the Federal Water Pollution Control Act Section 303(d) (33 USC Section 1313(d)).
- (2) The Department will group stream segments and other waterbodies geographically by subbasin and develop TMDLs for those subbasins, unless it determines another approach is warranted.
- (3) The Department will prioritize and schedule TMDLs for completion considering the following factors:
  - (a) Severity of the pollution,
  - (b) Uses of the water,
  - (c) Availability of resources to develop TMDLs,
  - (d) Specific judicial requirements, and
  - (e) Any other relevant information.
- (4) A TMDL will include the following elements:
  - (a) Name and location. This element describes the geographic area for which the TMDL is developed and includes maps as appropriate.
  - (b) Pollutant identification. This element identifies the pollutants causing impairment of water quality that are addressed in the TMDL.
  - (c) Water quality standards and beneficial uses. This element identifies the beneficial uses in the basin and the relevant water quality standards, including specific basin standards established in OAR 340-041-0202 through 340-041-0975. The beneficial use that is most sensitive to impairment by the pollutant or pollutants addressed in the TMDL will be specified.
  - (d) Loading capacity. This element specifies the amount of a pollutant or pollutants that a waterbody can receive and still meet water quality standards. The TMDL will be set at a level to ensure that loading capacity is not exceeded. Flow assumptions used in the TMDL will be specified.
  - (e) Excess load. This element evaluates, to the extent existing data allow, the difference between the actual pollutant load in a waterbody and the loading capacity of that waterbody.

(f) Sources or source categories. This element identifies the pollutant sources and estimates, to the extent existing data allow, the amount of actual pollutant loading from these sources. The TMDL will establish wasteload allocations and load allocations for these sources. The Department will use available information and analyses to identify and document sources.

(g) Wasteload allocations. This element determines the portions of the receiving water's loading capacity that are allocated to existing point sources of pollution, including all point source discharges regulated under the Federal Water Pollution Control Act Section 402 (33 USC Section 1342).

(h) Load allocations. This element determines the portions of the receiving water's loading capacity that are allocated to existing nonpoint sources, including runoff, deposition, soil contamination and groundwater discharges, or to background sources. Load allocations are best estimates of loading, and may range from reasonably accurate estimates to gross allotments depending on the availability of data and appropriate techniques for predicting loading. Whenever reasonably feasible, natural background, long-range transport and anthropogenic nonpoint source loads will be distinguished from each other.

(i) Margin of safety. This element accounts for uncertainty related to the TMDL and, where feasible, quantifies uncertainties associated with estimating pollutant loads, modeling water quality and monitoring water quality. The TMDL will explain how the margin of safety was derived and incorporated into the TMDL.

(j) Seasonal variation. This element accounts for seasonal variation and critical conditions in stream flow, sensitive beneficial uses, pollutant loading and water quality parameters so that water quality standards will be attained and maintained during all seasons of the year.

(k) Reserve capacity. This element is an allocation for increases in pollutant loads from future growth and new or expanded sources. The TMDL may allocate no reserve capacity and explain that decision.

(l) Water quality management plan (WQMP). This element provides the framework of management strategies to attain and maintain water quality standards. The framework is designed to work in conjunction with detailed plans and analyses provided in sector-specific or source-specific implementation plans. The WQMP will address the following:

(A) Condition assessment and problem description.

(B) Goals and objectives.

(C) Proposed management strategies designed to meet the wasteload allocations and load allocations in the TMDL. This will include a categorization of sources and a description of the management strategies proposed for each source category.

(D) Timeline for implementing management strategies including:

(i) Schedule for revising permits,

(ii) Schedule for achieving appropriate incremental and measurable water quality targets,

(iii) Schedule for implementing control actions, and

(iv) Schedule for completing other measurable milestones.

(E) Explanation of how implementing the management strategies will result in attainment of water quality standards.

(F) Timeline for attainment of water quality standards.

(G) Identification of persons, including Designated Management Agencies (DMAs), responsible for implementing the management strategies and developing and revising sector-specific or source-specific implementation plans.

(H) Identification of sector-specific or source-specific implementation plans that are available at the time the TMDL is issued.

(I) Schedule for preparation and submission of sector-specific or source-specific implementation plans by responsible persons, including DMAs, and processes that trigger revisions to these implementation plans.

(J) Description of reasonable assurance that management strategies and sector-specific or source-specific implementation plans will be carried out through regulatory or voluntary actions.

(K) Plan to monitor and evaluate progress toward achieving TMDL allocations and water quality standards including:

(i) Identification of persons responsible for monitoring, and

(ii) Plan and schedule for reviewing monitoring information and revising the TMDL.

(L) Plan for public involvement in implementing management strategies.

(M) Description of planned efforts to maintain management strategies over time.

(N) General discussion of costs and funding for implementing management strategies. Sector-specific or source-specific implementation plans may provide more detailed analyses of costs and funding for specific management strategies.

(O) Citation of legal authorities relating to implementation of management strategies.

(5) To determine allocations for sources identified in the TMDL, the Department:

(a) Will use water quality data analyses, which may include statistical analyses or mathematical models.

(b) May use surrogate measures to estimate allocations for pollutants addressed in the TMDL. The Department may use one or more surrogate measures for a pollutant that is difficult to measure or highly variable. A surrogate measure will be closely related to the pollutant, and may be easier to monitor and track. The TMDL will establish the correlation between the surrogate measure and pollutant.

(6) The Department will distribute wasteload and load allocations among identified sources and in doing so, may consider the following factors:

(a) Contributions from sources;

(b) Costs of implementing measures;

- (c) Ease of implementation;
  - (d) Timelines for attainment of water quality standards;
  - (e) Environmental impacts of allocations;
  - (f) Unintended consequences;
  - (g) Reasonable assurances of implementation; and
  - (h) Any other relevant factor.
- (7) After issuing the TMDL, the Department may revise the loading capacity and allocations to accommodate changed needs or new information. In making these revisions, the Department will comply with the public notice provisions in OAR 340-042-0050(2) and procedures for issuing TMDL orders in OAR 340-042-0060.
- (8) If the Environmental Protection Agency establishes a TMDL addressing waterbodies in Oregon, the Department may prepare a WQMP to implement that TMDL

### Implementing a Total Maximum Daily Load

(1) Management strategies identified in a WQMP to achieve wasteload and load allocations in a TMDL will be implemented through water quality permits for those sources subject to permit requirements in ORS 468B.050 and through sector-specific or source-specific implementation plans for other sources. WQMPs will identify the sector and source-specific implementation plans required and the persons, including DMAs, responsible for developing and revising those plans.

(2) The Nonpoint source discharges of pollutants from forest operations on state or private lands are subject to best management practices and other control measures established by the Oregon Department of Forestry will develop and enforce implementation plans addressing state and private forestry sources as authorized by under the ORS 527.610 through 527.992 and according to OAR chapter 629, divisions 600 through 665. The Such forest operations, when conducted in good faith compliance with the Forest Practices Act requirements are generally deemed not to cause violations of water quality standards as provided in ORS 527.770. Where the department determines that there are adequate resources and data available, the department will also assign sector or source specific load allocations needed for nonpoint sources of pollution on state and private forestlands to implement the load allocations. In areas where a TMDL has been approved, site specific rules under the Forest Practices Act rules will need to be revised if the department determines that the generally applicable Forest Practices Act rules are not adequate to implement the TMDL load allocations. If a resolution cannot be achieved, the department will request the Environmental Quality Commission to petition the Board of Forestry for a review of part or all of Forest Practices Act rules implementing the TMDL.

(3) In areas subject to the Agricultural Water Quality Management Act the Oregon Department of Agriculture will develop implementation plans for agricultural activities and soil erosion and enforce associated rules as authorized by (ODA) under ORS 568.900 through 568.933 and 561.191 and according to OAR chapter 603, divisions 90 and 95 develops and implements agricultural water quality management area plans and rules to prevent and control water pollution from agricultural activities and soil erosion on agricultural and rural lands. Where the department determines that there are adequate resources and data available, the department will also assign sector or source specific load allocations needed for agricultural or rural nonpoint sources to implement the load allocations. In areas where a TMDL has been approved, agricultural water quality management area plans and rules must be sufficient to meet the TMDL load allocations. If the department determines that the plan and rules are not adequate to implement the load allocation, the department will provide ODA with comments on what would be sufficient to meet TMDL load allocations. If a resolution cannot be achieved, the department will request the Environmental Quality Commission to petition ODA for a review of part or all of water quality management area plan and rules implementing the TMDL.

(4) Persons, including DMAs other than the Oregon Department of Forestry or the Oregon Department of Agriculture, identified in a WQMP as responsible for developing and revising sector-specific or source-specific implementation plans must:

(a) Prepare an implementation plan and submit the plan to the Department for review and approval according to the schedule specified in the WQMP. The implementation plan must:

(A) Identify the management strategies the DMA or other responsible person will use to achieve load allocations and reduce pollutant loading;

(B) Provide a timeline for implementing management strategies and a schedule for completing measurable milestones;

(C) Provide for performance monitoring with a plan for periodic review and revision of the implementation plan;

(D) To the extent required by ORS 197.180 and OAR chapter 340, division 18, provide evidence of compliance with applicable statewide land use requirements; and

(E) Provide any other analyses or information specified in the WQMP.

(b) Implement and revise the plan as needed.

(5) For sources subject to permit requirements in ORS 468B.050, wasteload allocations and other management strategies will be incorporated into permit requirements.

**DIVISION 45**

**REGULATIONS PERTAINING TO NPDES AND WPCF PERMITS**

**OAD 340-045-0105**

**Intake Credits**

(1) General Provisions. The following provisions apply to the consideration of intake pollutants in determining reasonable potential under section (2) of this rule and the consideration of intake pollutants in establishing water quality based effluent limits under section (3) of this rule.

These provisions do not alter the permitting authority's obligation under 40 CFR 122.44(d)(vii)(B) to develop effluent limitations consistent with the assumptions and requirements of any available waste load allocations for the discharge, that is part of a TMDL prepared by the department and approved by EPA pursuant to 40 CFR 130.7, or prepared by EPA pursuant to 40 CFR 130.7(d).

(a) An "intake pollutant" is the amount of a pollutant that is present in public waters (including groundwater as provided in subsection (d), below, at the time it is withdrawn from such waters by the discharger or other facility supplying the discharger with intake water.

(b) An intake pollutant is considered to be from the "same body of water" as the discharge if the department finds that the intake pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee. This finding may be deemed established if:

(A) The background concentration of the pollutant in the receiving water (excluding any amount of the pollutant in the facility's discharge) is similar to that in the intake water;

(B) There is a direct hydrological connection between the intake and discharge points; and

(C) Water quality characteristics (e.g., temperature, pH, hardness) are similar in the intake and receiving waters.

(c) The department may also consider other site-specific factors relevant to the transport and fate of the pollutant to make the finding in a particular case that a pollutant would or would not have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee.

(d) An intake pollutant from groundwater may be considered to be from the "same body of water" if the department determines that the pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee, except that such a pollutant is not from the same body of water if the groundwater contains the pollutant partially or entirely due to human activity, such as industrial, commercial, or municipal operations, disposal actions, or treatment processes.

(e) The determinations made under Sections (2) and (3), below, will be made on a pollutant-by-pollutant and outfall-by-outfall basis.

(2) Consideration of Intake Pollutants in Determining Reasonable Potential:

(a) The department may determine that there is “no reasonable potential” for the discharge of an identified intake pollutant to cause or contribute to an excursion above a narrative or numeric water quality criterion contained in Oregon’s water quality standards where a discharger demonstrates to the satisfaction of the department (based upon information provided in the permit application or other information) that:

(A) The facility withdraws 100 percent of the intake water containing the pollutant from the same body of water into which the discharge is made;

(B) The facility does not contribute any additional mass of the identified intake pollutant to its wastewater;

(C) The facility does not alter the identified intake pollutant chemically or physically in a manner that would cause adverse water quality impacts to occur that would not occur if the pollutants were left in-stream;

(D) The facility does not increase the identified intake pollutant concentration at the edge of the mixing zone, or at the point of discharge if a mixing zone is not allowed, as compared to the pollutant concentration in the intake water, unless the increased concentration does not cause or contribute to an excursion above an applicable water quality standard; and

(E) The timing and location of the discharge would not cause adverse water quality impacts to occur that would not occur if the identified intake pollutant were left in-stream.

(b) Upon a finding under subsection (a) of this section that an intake pollutant in the discharge does not cause, have the reasonable potential to cause, or contribute to an excursion above an applicable water quality standard, the department is not required to include a water quality-based effluent limit for the identified intake pollutant in the facility's permit, provided:

(A) The NPDES permit evaluation report includes a determination that there is no reasonable potential for the discharge of an identified intake pollutant to cause or contribute to an excursion above an applicable numeric water quality criterion and references appropriate supporting documentation included in the administrative record;

(B) The permit requires all influent, effluent, and ambient monitoring necessary to demonstrate that the conditions above in subsection (a) of this section are maintained during the permit term; and

(C) The permit contains a re-opener clause authorizing modification or revocation and re-issuance of the permit if new information shows the discharger no longer meets the conditions in subsection (a) (A) through (E) of this section.

(3) Consideration of Intake Pollutants in Establishing Water Quality Based Effluent Limits (WQBELs):



(a) The department may consider pollutants in intake water as provided in section (3) when establishing water quality-based effluent limitations based on narrative or numeric criteria, provided that the discharger has demonstrated that the following conditions are met:

(A) The facility withdraws 100 percent of the intake water containing the pollutant from the same body of water into which the discharge is made;

(B) The observed maximum ambient background concentration and the intake water concentration of the pollutant exceeds the most stringent applicable water quality criterion for that pollutant;

(C) The facility does not alter the identified intake pollutant chemically or physically in a manner that would cause adverse water quality impacts to occur that would not occur if the pollutants were left in-stream;

(D) The facility does not increase the identified intake pollutant concentration, as defined by the department, at the point of discharge as compared to the pollutant concentration in the intake water; and

(E) The timing and location of the discharge would not cause adverse water quality impacts to occur that would not occur if the identified intake pollutant were left in-stream.

(b) Where the conditions in subsection (a) of this section are met, the department may establish a water quality-based effluent limitation allowing the facility to discharge a mass and concentration of the intake pollutant that are no greater than the mass and concentration found in the facility's intake water. A discharger may add mass of the pollutant to its waste stream if an equal or greater mass is removed prior to discharge, so there is no net addition of the pollutant in the discharge compared to the intake water.

(c) Where proper operation and maintenance of a facility's treatment system results in the removal of an intake water pollutant, the department may establish limitations that reflect the lower mass and concentration of the pollutant achieved by such treatment.

(d) Where intake water for a facility is provided by a municipal water supply system and the supplier provides treatment of the raw water that removes an intake water pollutant, the concentration of the intake water pollutant will be determined at the point where the water enters the water supplier's distribution system.

(e) Where a facility discharges intake pollutants from multiple sources that originate from the receiving water body and from other water bodies, the department may derive an effluent limitation reflecting the flow-weighted amount of each source of the pollutant provided that adequate monitoring to determine compliance can be established and is included in the permit.

(f) The permit will specify how compliance with mass and concentration-based limitations for the intake water pollutant will be assessed. This may be done by basing the effluent limitation on background concentration data. Alternatively, the department may determine compliance by monitoring the pollutant concentrations in the intake water and in the effluent. This monitoring may be supplemented by monitoring internal waste streams or by a department evaluation of the use of best management practices.

(g) In addition to the above, effluent limitations must be established to comply with all other applicable State and Federal laws and regulations including technology-based requirements and anti-degradation policies.

(h) When determining whether WQBELs are necessary, information from chemical-specific, whole effluent toxicity and biological assessments will be considered independently.

(i) Permits limits must be consistent with the assumptions and requirements of waste load allocations or other provisions in a TMDL that has been approved by the EPA.