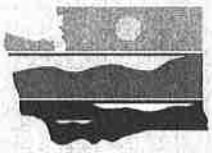

DEPARTMENT OF
ECOLOGY
State of Washington

# Rule Implementation Plan

## Water Quality Standards for Surface Waters of the State of Washington

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## Amendments to Chapter 173-201A WAC

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# Implementation Plan for Preliminary Draft Revisions to Chapter 173-201A WAC

## Purpose

The Department of Ecology (Ecology) provides the information in this implementation plan to meet agency and Administrative Procedure Act (RCW 34.05.328) requirements related to rule adoptions.

## Introduction

On September 30, 2014, Ecology released a preliminary draft of revisions to Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington. These changes will be to adopt toxic criteria to protect human health and language on implementation tools. The purpose of this preliminary draft rule implementation plan is to inform those who must comply with Chapter 173-201A WAC about how Ecology intends to:

- Implement and enforce the rule.
- Inform and educate persons affected by the rule.
- Promote and assist voluntary compliance for the rule.
- Evaluate the rule.
- Train and inform Ecology staff about the new or amended rule.

Also included in this plan is information about:

- Supporting documents that may need to be written or revised because of the new rule or amended rule.
- Other resources where more information about the rule is available.
- Contact information for Ecology employees who can answer questions about the rule implementation.

In general, Ecology would implement and enforce the proposed changes in the draft rule (after final rule adoption and upon rule effective date) in the same way the current rule is implemented and enforced. The preliminary draft rule changes include human health criteria for surface water (WAC 173-201A-240) and three separate implementation tools: variances (WAC 173-201A-420), compliance schedules (WAC 173-201A-510(4)), and intake credits (WAC 173-201A-460). The proposed modifications to the variance and compliance schedule language are changes to existing language. The proposed human health criteria and the proposed intake credit language are new sections added to the rule.

## Summary of proposed changes

The proposed rule revision would result in several important changes to the state standards:

**New human health criteria for surface waters.**

*(1) Numeric criteria.* The proposed human health criteria are water concentrations for 96 toxic substances to protect people who consume fish and shellfish from local waters and who drink untreated water from local surface waters. These criteria are calculated from a variety of different factors, including chemical-specific toxicity to humans, how chemicals move from water into fish and shellfish and then into humans, as well as other factors. The criteria

calculation and these factors are discussed at more length in the Overview of Key Decisions document section on Human Health Criteria Equations and Variables. Specific sections on PCBs and arsenic are found in the Overview of Key Decisions document. The arsenic approach includes specific language on arsenic reduction efforts to protect Washington surface waters. Thus, the preliminary rule contains a mix of (1) calculated criteria values, and (2) values based directly on the National Toxics Rule (NTR) as part of the overlain risk management decision described above. This does not apply to arsenic, where the preliminary draft proposal is a value based on the Safe Drinking Water Act.

**Implementation tools**

*(2) Variances:* Variances are temporary changes that waive the Surface Water Quality Standards (WQS) for a specific chemical and designated use for either a single discharge or for multiple discharges, or for specified stretches of surface waters (e.g., for a specific tributary, a lake, a watershed, etc.). Variances are used in situations where it can be demonstrated that: (1) a discharge can meet the permit limit or a water body can meet the criteria and designated use, but needs a longer time frame than allowed in a compliance schedule, or (2) it is not known whether the discharge will ever be able to meet the permit limit or a receiving water body's criteria and designated use. Because a variance is a temporary change to a criteria and use, variances are considered changes to the Water Quality Standards (WQS) and must go to EPA as a rule amendment.

The current WQS give a brief list of the requirements for granting variances, including a maximum five-year time frame. The federal and state requirements for variances are brief, and demonstrating the need for a variance could be very labor intensive, depending on the specific situation. More detailed specifications in the WQS will help set clearer expectations for both discharges and the state, and will result in more predictable outcomes for dischargers.

This proposed rule-change does not grant any specific variances to WQS. Instead, this proposed rule change gives more details on the information requirements for granting variances and on the types of actions that would be required of dischargers during variance periods. This includes a proposal to extend the duration of variances beyond five years if necessary.

*(3) Compliance schedules:* Compliance schedules are tools used in Ecology discharge permits, orders, or other directives that allow time for discharges to make needed modifications to treatment processes in order to meet permit limits or requirements. They are commonly used for construction and treatment plant upgrades, and cannot be used for new or expanding discharges. Compliance schedules are used when there is an expectation that the discharge will meet permit limits at the end of the schedule. The current WQS contain a maximum time limit of ten years for compliance schedules. In 2009 the Washington legislature passed a law requiring Ecology to develop longer compliance schedules for certain types of discharges. This preliminary draft rule follows that legislative direction by removing the maximum time limit for compliance schedules. This approach applies to compliance schedules for the National Pollutant Discharge Elimination System (NPDES) permits.

*(4) Intake credits:* Intake credits are a permitting tool that allows a discharge limit to be calculated in a way that does not require the discharger to "clean-up" pollutants in the discharge beyond the level of intake water when the intake and receiving water body for the discharge are the same water body. This tool is currently used for technology-based limits, but Washington does not have a regulation that allows use of this tool to meet limits based on water quality criteria (a.k.a. water quality-based limits). This tool is used to meet water quality-based limits in several other states, including Oregon and the Great Lakes states.

This preliminary draft rule contains language describing how and when intake credits could be used.

## Guidance

Ecology intends to develop guidance to assist Ecology staff and others to implement the final new and revised portions of the rule. This will help ensure the new criteria and implementation tools are consistently applied by Ecology. This future guidance will be available online and will be updated as experience implementing the new standards warrants. See List of Supporting Documents of this document for a complete list of guidance that will be done to support this rule.

**Incorporating and implementing rule revisions**

*Approval of the New Standards by the USEPA*

The rule becomes effective 31days after the final rule adoption. However, the state water quality standards must also be approved by EPA to determine that the revisions in the rule comply with the federal Clean Water Act. Clean Water Act approval may require EPA consultation on portions of the final rule that could affect ESA-listed aquatic species.

EPA can take one of the following courses of action on the state's new rule:

1. Approve within 60 days of submittal
2. Disapprove within 90 days of submittal
4. Partially approve or partially disapprove portions of the revised rule.

EPA has informed Ecology that the intake credits portion of the proposed rule is "not a water quality standard," and thus that portion of the future rule will not require Clean Water Act approval, and will be available for use 31 days after filing.

Ecology will keep the public up-to-date and informed on how federal approval of the new rule is proceeding.

**List of impaired waters - 303(d)**

Periodically, Ecology produces a list of impaired waters that do not meet the water quality standards. This list is commonly called the 303(d) list, since the requirements come from Section 303(d) of the federal Clean Water Act. The existing federal human health criteria issued to Washington in 1992 (and as revised in 1999) are being used to develop the 303(d) list for 2014. Future 303(d) lists will use the water quality standards that have been adopted and approved at the time the 303(d) list is compiled. If adopted, these new water quality standards will be used to determine impaired water bodies for future listings.

**Total maximum daily loads (TMDLs)**
There is continuous ongoing TMDL work that will be in various stages of completion once the standards are finalized. This chart describes how Ecology plans to manage that work once the standards become effective.

| TMDL Status | Transition Solution |
|---|---|
| 1. TMDL formally approved, submitted, or ready to be submitted | • Keep TMDL in place, even if criteria in the new rule is different<br>• Continue implementation measures<br>• Monitor compliance with TMDL allocations<br>• Compare TMDL targets to new criteria, but not required to change targets<br>• Water body will be placed in category 4a: Has a TMDL - in accordance with the new 303(d) listing policy |
| 2. TMDL not yet approved, but field work completed and report may or may not be completed | • Proceed with submittal of TMDL package prior to the effective date of newly adopted standards<br>• The Summary Implementation Strategy in the TMDL needs to address monitoring plan to pick up new criteria if possible<br>• Possible exceptions requiring closer evaluation involve point source dominated TMDLs |
| 3. TMDL study in progress and field work begun but not completed | • Continue study but include new criteria, if possible<br>• Analysis may still be based on old criteria<br>• Extent of inclusion of new criteria depends on individual study and the difference between the old and new criteria<br>• Develop monitoring plan that incorporates new criteria |
| 4. TMDL study planned and no field work yet begun | • Include new criteria in study design and sampling and drop old criteria |
| 5. 303(d) listed but no priority set for doing study | • Retain on 303(d) list<br>• Continue to scope and schedule projects. When projects are selected for work, the project would be treated the same as in (4) above |

**Revisions to the toxics table**
*Proposed changes to the format of the toxics table*: Permit writers will need to refer to the new proposed toxics table in WAC 173-201A-240 to determine the new proposed criteria.

Changes to all criteria will be implemented when permits are renewed or when new permits are issued.

**Permits**
There is ongoing permit work that will be in various stages of completion once the standards become effective. This table describes how Ecology plans to manage that work once the standards become effective.

| Permit Status at the Date of Adoption | Transition Solution |
|---|---|
| 1. Public notice completed | Issue permit but make sure applicant understands that new rules were just adopted and might cause changes in the next permit. |
| 2. Entity review completed but public notice not started. New standards don't affect reasonable potential or the limits. | Go to public notice with permit |
| 3. Entity review completed but public notice not started. New standards cause reasonable potential and effluent limits | Go to public notice with the permit. Prior to notice, Ecology will first estimate whether the reasonable potential determination would likely change if the standards get approval from EPA and whether it would make a significant difference to our decision and conditions. |
| 4. Entity review not begun | Use new criteria to do reasonable potential and effluent limits. |

**401 Certifications**

Ecology will issue 401 Certifications based on the standards that are in effect when the certification is issued. When Ecology goes to public notice, it can estimate how the certification might change if the proposed WQS become effective (after approval from EPA) prior to issuance of the certification, and whether it would make a significant difference to Ecology's decision and conditions.

All certifications that go to public notice after the standards are revised should be based on the new standards.

## Informing and educating persons affected by the rule

Ecology will inform and educate affected parties through ongoing, already established meeting venues, holding specific meetings, doing outreach to our email listserve, and using our website.

## Previous activities

Affected persons and the public have been informed and educated about the potential and proposed changes to the water quality standards over the past several years. Since this rulemaking began in 2012, there have been numerous technical and policy forums, stakeholder discussions, and public workshops and meetings. Statewide public workshops were held on several occasions prior to publication of the preliminary draft rule. The most recent comprehensive stakeholder meetings were a public meeting on November 6, 2013 and a Delegate's Table meeting on February 10, 2014.

## Current activities

For the release of the preliminary draft rule, Ecology emailed announcements to approximately 1000 individuals on our WQS listserve informing them of Ecology's preliminary draft changes to the water quality standards. All of the preliminary draft changes to the water quality standards are available to the public on Ecology's website. (http://www.ecy.wa.gov/programs/wq/swqs/Currswqsruleactiv.html). This material includes the proposed regulatory language and supporting documentation. The water quality standards ListServ will continue to provide updates. Interested persons can obtain written material upon request.

## Future activities

When a formal proposed draft rule is released, public meetings and hearings on the formal draft rule proposal will be held. The purpose of these workshops and hearings will be to inform and educate the public on the reasons for the proposed changes and to give the public an opportunity to ask questions and formally testify on the proposal. During the formal public comment period, Ecology will also consult directly with tribes and interested parties can submit written comments.

After final rule adoption, Ecology will work with interested parties to prioritize guidance document needs. Currently, it is anticipated that guidance on implementation tools (variances, compliance schedules, and intake credits) and pollution reduction activities for arsenic will be the initial primary focus for guidance development.

Ecology will continue to be available to external interests after final rule adoption to explain the final rule changes.

Ecology will also prepare a formal package with the final rule and supporting documentation, to submit to EPA for approval. Until EPA gives written approval of the state's new standards, they cannot be used for federal actions (including NPDES permitting and 401 certifications).

## Promoting and assisting voluntary compliance

Ecology will provide direct technical assistance to any entity that requests it. Ecology will continue to work with key interests that are covered under the water quality standards. Ecology continues to encourage voluntary compliance with the water quality standards. Ecology supports numerous water quality programs that, at least in part, promote voluntary compliance:

- Total maximum daily loads (TMDLs)
- Nonpoint pollution programs
- Federal and state grants and loans
- Ongoing technical assistance from permit writers and compliance staff

These programs provide a great deal of financial and technical support to entities voluntarily complying with the water quality standards.

## Evaluating rule

Ecology is required to report on progress made implementing the water quality standards through our 303(d) reporting requirements to EPA. We will identify waters that are meeting these criteria, not meeting these criteria, or are scheduled for a TMDL.

The purpose of the surface water quality standards is to restore and maintain the chemical, physical, and biological integrity of Washington's waters. More specifically, the water quality standards are designed to protect public health, public recreation in the waters, and the propagation of fish, shellfish, and wildlife. The numeric and narrative criteria in the water quality standards are intended to protect those beneficial uses.

The final changes to the water quality standards will be considered to have achieved their purpose if they fully protect the beneficial uses. The water quality standards should also protect those beneficial uses in the least burdensome way.

*Interim milestones:* The preliminary draft rule language on compliance schedules and variances include requirements for interim milestones to meet water quality standards. These milestones include interim permit limits and proposed language on future use of interim water quality criteria and designated uses, and pollution reduction activities (if variances are adopted in subsequent rule changes).

*Objectively measurable outcome:* Outcomes of the rule can be measured if water quality standards are attained. Ecology monitors surface waters across the state to determine whether designated uses are being met. Monitoring data (meeting requirements of the Data Quality Act; RCW 90-48-570 to 90-48-590) will be used to determine whether designated uses are met.

## Training and informing agency staff

A rule-making of this magnitude will require broad outreach to permit writers and other staff and management involved with water quality regulation. This will be done through meetings, email communication, written guidance and one-on-one communication. After final adoption of the rule, Ecology will notify all Water Quality Program staff, as well as staff from other programs that would use the new criteria or tools, again after EPA has finished its Clean Water Act (CWA) review of the newly adopted standards. The proposed intake credit provision would be available for use immediately after adoption of the rule because this provision does not require EPA CWA review. However, other new provisions will need CWA review and approval before use. Below are examples of staff resources to address training and information sharing related to the final rule.

*NPDES permits and 401 certifications:* The Water Quality Program will provide training for the Ecology permit writers on changes to the rule and to permit writer's guidance. In addition, permit writers are given the opportunity to review and comment on changes to Ecology's *Water Quality Program Permit Writer's Manual,* which will contain the new guidance on how to implement the final rule changes. Permit writing tools and templates and forms will be updated to account for provisions in the final rule, and permit writers will be notified of changes. Most changes to the guidance discussed here would need approval from the program management team represented by both regional and headquarters management. Thus, the permit writing staff

will also receive reinforcement from their local management regarding use of new guidance. Ongoing support is provided by Ecology's Permit Writer's Workgroup, made up of permit writers who meet quarterly to discuss emerging issues and facilitate communication throughout the regions and across other programs with staff who issue permits.

*Water Quality Assessment:* The staff working with the Water Quality Assessment will be involved in determining any new approaches that are needed in order to assess Washington waters for compliance with the final human health criteria. Portions of that group are already involved with the preliminary draft rule via the development of information to support the Administrative Procedures Act-required preliminary Cost Benefit Analysis. This group will continue to be involved with the Cost Benefit Analysis until the final rule is adopted, and will be aware of all changes to criteria that will affect how surface waters are assessed.

*Total maximum daily loads:*
The TMDL staff at Ecology's regions will be informed of changes to the standards through TMDL implementation workshops and *Water Quality Program Permit Writer's Manual* notifications.

Additional training on implementation of the revised water quality standards will also be made available to those staff upon request.

## List of supporting documents that may need to be written or revised

Guidance and other documents that will need to be developed or revised:

- Ecology's *Water Quality Program Permit Writer's Manual* will need be modified to include new guidance on:
    - Compliance schedules
    - Water quality-based intake credits
    - How requirements in a variance are placed in permits
    - Arsenic reduction efforts. The new arsenic criteria are paired with arsenic source reduction requirements. How those requirements are specified in permits will be described in the Permit Writers Manual.
    - How the duration of exposure (lifetime or other exposure assumptions) is considered in human health criteria implementation.
- Permit templates, Fact Sheet templates, and permit application forms will need to be updated to reflect the new criteria and tools.
- PermitCalc (Ecology's permit spreadsheet tool) will need to be updated.
- Materials available to the public (e.g., web sites, Focus Sheets) will need to be updated to reflect the final rule.
- The Water Quality Assessment and the 303(d) listing policy (Ecology Water Quality Program Policy 1-11) will need to be revised to reflect the new rule. Specifically, a new

policy on the assessment and listing process for the new arsenic criteria will need to be developed. The current policy uses fish tissue as the basis of listing for human health criteria impairments. The new arsenic criteria are water concentrations for total arsenic – there is no bioconcentration factor included in this chemical's criteria development (the criteria cannot be equated with tissue concentrations), and the criteria are based on the drinking water exposure route. The new criteria are expressed as a total measure in the water column (not inorganic, filtered, or dissolved). The basis of the new criteria concentrations is the Safe Drinking Water Act Maximum Contaminant Level (MCL). The MCL was developed with consideration of the carcinogenicity of arsenic.

- Variance guidance describing the general and specific requirements for different types of variances (individual or multiple discharger, water body) will need to be developed. The variance guidance might be combined with the current draft guidance on Use Attainability Analysis (both variances and use attainability analyses are based on similar federal guidance and requirements) or could be a stand-alone document.
- Listings of all active variances will be made available to the public on the web.

## More information

For additional information go to Ecology websites noted below::

Rule making website:
http://www.ecy.wa.gov/programs/wq/swqs/Currswqsruleactiv.html

Water Quality Standards website:
http://www.ecy.wa.gov/programs/wq/swqs/index.html

Contact information
For a better understanding of the human health criteria and implementation rules contact:

Cheryl Niemi
Washington Department of Ecology
360-407-6440
Email: cheryl.niemi@ecy.wa.gov

For a better understanding of the human health criteria and implementation rules in permits contact:

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AMENDATORY SECTION (Amending WSR 11-09-090, filed 4/20/11, effective 5/21/11)

**WAC 173-201A-020 Definitions.** The following definitions are intended to facilitate the use of chapter 173-201A WAC:

**"1-DMax"** or **"1-day maximum temperature"** is the highest water temperature reached on any given day. This measure can be obtained using calibrated maximum/minimum thermometers or continuous monitoring probes having sampling intervals of thirty minutes or less.

**"7-DADMax"** or **"7-day average of the daily maximum temperatures"** is the arithmetic average of seven consecutive measures of daily maximum temperatures. The 7-DADMax for any individual day is calculated by averaging that day's daily maximum temperature with the daily maximum temperatures of the three days prior and the three days after that date.

**"Action value"** means a total phosphorus (TP) value established at the upper limit of the trophic states in each ecoregion (see Table 230(1)). Exceedance of an action value indicates that a problem is suspected. A lake-specific study may be needed to confirm if a nutrient problem exists.

**"Actions"** refers broadly to any human projects or activities.

**"Acute conditions"** are changes in the physical, chemical, or biologic environment which are expected or demonstrated to result in injury or death to an organism as a result of short-term exposure to the substance or detrimental environmental condition.

**"AKART"** is an acronym for "all known, available, and reasonable methods of prevention, control, and treatment." AKART shall represent the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge. The concept of AKART applies to both point and nonpoint sources of pollution. The term "best management practices," typically applied to nonpoint source pollution controls is considered a subset of the AKART requirement.

**"Background"** means the biological, chemical, and physical conditions of a water body, outside the area of influence of the discharge under consideration. Background sampling locations in an enforcement action would be up-gradient or outside the area of influence of the discharge. If several discharges to any water body exist, and enforcement action is being taken for possible violations to the standards, background sampling would be undertaken immediately up-gradient from each discharge.

**"Best management practices (BMP)"** means physical, structural, and/or managerial practices approved by the department that, when used singularly or in combination, prevent or reduce pollutant discharges.

**"Biological assessment"** is an evaluation of the biological condition of a water body using surveys of aquatic community structure and function and other direct measurements of resident biota in surface waters.

**"Bog"** means those wetlands that are acidic, peat forming, and whose primary water source is precipitation, with little, if any, outflow.

**"Carcinogen"** means any substance or agent that produces or tends to produce cancer in humans. For implementation of this chapter, the term carcinogen will apply to substances on the United States Environmental Protection Agency lists of A (known human) and B (probable human) carcinogens, and any substance which causes a significant in-

creased incidence of benign or malignant tumors in a single, well conducted animal bioassay, consistent with the weight of evidence approach specified in the United States Environmental Protection Agency's Guidelines for Carcinogenic Risk Assessment as set forth in 51 FR 33992 et seq. as presently published or as subsequently amended or republished.

**"Chronic conditions"** are changes in the physical, chemical, or biologic environment which are expected or demonstrated to result in injury or death to an organism as a result of repeated or constant exposure over an extended period of time to a substance or detrimental environmental condition.

**"Compliance schedule"** or **"schedule of compliance"** is a schedule of remedial measures included in a permit or an order, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with an effluent limit, other prohibition, or standard.

**"Created wetlands"** means those wetlands intentionally created from nonwetland sites to produce or replace natural wetland habitat.

**"Critical condition"** is when the physical, chemical, and biological characteristics of the receiving water environment interact with the effluent to produce the greatest potential adverse impact on aquatic biota and existing or designated water uses. For steady-state discharges to riverine systems the critical condition may be assumed to be equal to the 7Q10 flow event unless determined otherwise by the department.

**"Damage to the ecosystem"** means any demonstrated or predicted stress to aquatic or terrestrial organisms or communities of organisms which the department reasonably concludes may interfere in the health or survival success or natural structure of such populations. This stress may be due to, but is not limited to, alteration in habitat or changes in water temperature, chemistry, or turbidity, and shall consider the potential build up of discharge constituents or temporal increases in habitat alteration which may create such stress in the long term.

**"Department"** means the state of Washington department of ecology.

**"Designated uses"** are those uses specified in this chapter for each water body or segment, regardless of whether or not the uses are currently attained.

**"Director"** means the director of the state of Washington department of ecology.

**"Drainage ditch"** means that portion of a designed and constructed conveyance system that serves the purpose of transporting surplus water; this may include natural water courses or channels incorporated in the system design, but does not include the area adjacent to the water course or channel.

**"Ecoregions"** are defined using EPAs *Ecoregions of the Pacific Northwest* Document No. 600/3-86/033 July 1986 by Omernik and Gallant.

**"Enterococci"** refers to a subgroup of fecal streptococci that includes *S. faecalis, S. faecium, S. gallinarum,* and *S. avium*. The enterococci are differentiated from other streptococci by their ability to grow in 6.5% sodium chloride, at pH 9.6, and at 10°C and 45°C.

***"E. coli"*** or ***"Escherichia coli"*** is an aerobic and facultative gram negative nonspore forming rod shaped bacterium that can grow at 44.5 degrees Celsius that is ortho-nitrophenyl-B-D-galactopyranoside (ONPG) positive and Methylumbelliferyl glucuronide (MUG) positive.

**"Existing uses"** means those uses actually attained in fresh or marine waters on or after November 28, 1975, whether or not they are

designated uses. Introduced species that are not native to Washington, and put-and-take fisheries comprised of nonself-replicating introduced native species, do not need to receive full support as an existing use.

**"Extraordinary primary contact"** means waters providing extraordinary protection against waterborne disease or that serve as tributaries to extraordinary quality shellfish harvesting areas.

**"Fecal coliform"** means that portion of the coliform group which is present in the intestinal tracts and feces of warm-blooded animals as detected by the product of acid or gas from lactose in a suitable culture medium within twenty-four hours at 44.5 plus or minus 0.2 degrees Celsius.

**"Geometric mean"** means either the nth root of a product of n factors, or the antilogarithm of the arithmetic mean of the logarithms of the individual sample values.

**"Ground water exchange"** means the discharge and recharge of ground water to a surface water. Discharge is inflow from an aquifer, seeps or springs that increases the available supply of surface water. Recharge is outflow downgradient to an aquifer or downstream to surface water for base flow maintenance. Exchange may include ground water discharge in one season followed by recharge later in the year.

**"Hardness"** means a measure of the calcium and magnesium salts present in water. For purposes of this chapter, hardness is measured in milligrams per liter and expressed as calcium carbonate ($CaCO_3$).

**"Intake credit"** is a procedure for establishing effluent limits in waste discharge permits issued pursuant to the National Pollutant Discharge Elimination System that take into account the amount of a pollutant that is present in public waters, at the time water is removed from the body of water by the discharger or other facility supplying the discharger with intake water.

**"Irrigation ditch"** means that portion of a designed and constructed conveyance system that serves the purpose of transporting irrigation water from its supply source to its place of use; this may include natural water courses or channels incorporated in the system design, but does not include the area adjacent to the water course or channel.

**"Lakes"** shall be distinguished from riverine systems as being water bodies, including reservoirs, with a mean detention time of greater than fifteen days.

**"Lake-specific study"** means a study intended to quantify existing nutrient concentrations, determine existing characteristic uses for lake class waters, and potential lake uses. The study determines how to protect these uses and if any uses are lost or impaired because of nutrients, algae, or aquatic plants. An appropriate study must recommend a criterion for total phosphorus (TP), total nitrogen (TN) in µg/l, or other nutrient that impairs characteristic uses by causing excessive algae blooms or aquatic plant growth.

**"Mean detention time"** means the time obtained by dividing a reservoir's mean annual minimum total storage by the thirty-day ten-year low-flow from the reservoir.

**"Migration or translocation"** means any natural movement of an organism or community of organisms from one locality to another locality.

**"Mixing zone"** means that portion of a water body adjacent to an effluent outfall where mixing results in the dilution of the effluent

with the receiving water. Water quality criteria may be exceeded in a mixing zone as conditioned and provided for in WAC 173-201A-400.

**"Natural conditions"** or **"natural background levels"** means surface water quality that was present before any human-caused pollution. When estimating natural conditions in the headwaters of a disturbed watershed it may be necessary to use the less disturbed conditions of a neighboring or similar watershed as a reference condition. (See also WAC 173-201A-260(1).)

**"New or expanded actions"** mean human actions that occur or are regulated for the first time, or human actions expanded such that they result in an increase in pollution, after July 1, 2003, for the purpose of applying this chapter only.

**"Nonpoint source"** means pollution that enters any waters of the state from any dispersed land-based or water-based activities including, but not limited to, atmospheric deposition; surface water runoff from agricultural lands, urban areas, or forest lands; subsurface or underground sources; or discharges from boats or marine vessels not otherwise regulated under the National Pollutant Discharge Elimination System program.

**"Permit"** means a document issued pursuant to chapter 90.48 RCW specifying the waste treatment and control requirements and waste discharge conditions.

**"pH"** means the negative logarithm of the hydrogen ion concentration.

**"Pollution"** means such contamination, or other alteration of the physical, chemical, or biological properties, of any waters of the state, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any waters of the state as will or is likely to create a nuisance or render such waters harmful, detrimental, or injurious to the public health, safety, or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish, or other aquatic life.

**"Primary contact recreation"** means activities where a person would have direct contact with water to the point of complete submergence including, but not limited to, skin diving, swimming, and water skiing.

**"Secondary contact recreation"** means activities where a person's water contact would be limited (e.g., wading or fishing) to the extent that bacterial infections of eyes, ears, respiratory or digestive systems, or urogenital areas would normally be avoided.

**"Shoreline stabilization"** means the anchoring of soil at the water's edge, or in shallow water, by fibrous plant root complexes; this may include long-term accretion of sediment or peat, along with shoreline progradation in such areas.

**"Storm water"** means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

**"Storm water attenuation"** means the process by which peak flows from precipitation are reduced and runoff velocities are slowed as a result of passing through a surface water body.

**"Surface waters of the state"** includes lakes, rivers, ponds, streams, inland waters, saltwaters, wetlands and all other surface wa-

ters and water courses within the jurisdiction of the state of Washington.

**"Temperature"** means water temperature expressed in degrees Celsius (°C).

**"Treatment wetlands"** means those wetlands intentionally constructed on nonwetland sites and managed for the primary purpose of wastewater or storm water treatment. Treatment wetlands are considered part of a collection and treatment system, and generally are not subject to the criteria of this chapter.

**"Trophic state"** means a classification of the productivity of a lake ecosystem. Lake productivity depends on the amount of biologically available nutrients in water and sediments and may be based on total phosphorus (TP). Secchi depth and chlorophyll-a measurements may be used to improve the trophic state classification of a lake. Trophic states used in this rule include, from least to most nutrient rich, ultra-oligotrophic, oligotrophic, lower mesotrophic, upper mesotrophic, and eutrophic.

**"Turbidity"** means the clarity of water expressed as nephelometric turbidity units (NTU) and measured with a calibrated turbidimeter.

**"Upwelling"** means the natural process along Washington's Pacific Coast where the summer prevailing northerly winds produce a seaward transport of surface water. Cold, deeper more saline waters rich in nutrients and low in dissolved oxygen, rise to replace the surface water. The cold oxygen deficient water enters Puget Sound and other coastal estuaries at depth where it displaces the existing deep water and eventually rises to replace the surface water. Such surface water replacement results in an overall increase in salinity and nutrients accompanied by a depression in dissolved oxygen. Localized upwelling of the deeper water of Puget Sound can occur year-round under influence of tidal currents, winds, and geomorphic features.

**"USEPA"** means the United States Environmental Protection Agency.

**"Variance"** is a temporary modification to the designated use and associated water quality criteria based on the factors specified in 40 C.F.R. 131.10(g), and must be adopted by rule.

**"Wetlands"** means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites((,)) including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands. (Water bodies not included in the definition of wetlands as well as those mentioned in the definition are still waters of the state.)

**"Wildlife habitat"** means waters of the state used by, or that directly or indirectly provide food support to, fish, other aquatic life, and wildlife for any life history stage or activity.

AMENDATORY SECTION (Amending WSR 11-09-090, filed 4/20/11, effective 5/21/11)

**WAC 173-201A-240 Toxic substances.** (1) Toxic substances shall not be introduced above natural background levels in waters of the ~~state which have the potential either singularly or cumulatively to~~ adversely affect characteristic water uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department.

(2) The department shall employ or require chemical testing, acute and chronic toxicity testing, and biological assessments, as appropriate, to evaluate compliance with subsection (1) of this section and to ensure that aquatic communities and the existing and designated uses of waters are being fully protected.

(3) USEPA Quality Criteria for Water, 1986, as revised, shall be used in the use and interpretation of the values listed in subsection (5) of this section.

(4) Concentrations of toxic, and other substances with toxic propensities not listed in Table 240 of this section shall be determined in consideration of USEPA Quality Criteria for Water, 1986, and as revised, and other relevant information as appropriate.

(5) The following criteria, found in Table 240((~~(3)~~)), shall be applied to all surface waters of the state of Washington ((~~for the protection of aquatic life~~)). Values are µg/L for all substances except ammonia and chloride which are mg/L, and asbestos which is million fibers/L.

(a) **Aquatic life protection**. The department may revise the following criteria in Table 240 for aquatic life on a statewide or water body-specific basis as needed to protect aquatic life occurring in waters of the state and to increase the technical accuracy of the criteria being applied. The department shall formally adopt any appropriate revised criteria as part of this chapter in accordance with the provisions established in chapter 34.05 RCW, the Administrative Procedure Act. The department shall ensure there are early opportunities for public review and comment on proposals to develop revised criteria. ((~~Values are µg/L for all substances except Ammonia and Chloride which are mg/L.~~))

(b) **Human health protection.** The following provisions apply to the human health criteria in Table 240. All waters shall maintain a level of water quality when entering downstream waters that provides for the attainment and maintenance of the water quality standards of those downstream waters, including the waters of another state. The human health criteria in the tables were calculated using a fish consumption rate of 175 g/day. The human health criteria calculations and variables include chronic durations of exposure up to seventy years. All human health criteria for metals are for total metal concentrations, unless otherwise noted. Dischargers have the obligation to reduce toxics in discharges through the use of AKART.

Table 240((~~(3)~~))
Toxics Substances Criteria

| ((~~Substance~~ | ~~Freshwater~~ | | ~~Marine Water~~ | |
|---|---|---|---|---|
| | ~~Acute~~ | ~~Chronic~~ | ~~Acute~~ | ~~Chronic~~ |
| ~~Aldrin/Dieldrin c~~ | ~~2.5a~~ | ~~0.0019b~~ | ~~0.71a~~ | ~~0.0019b~~ |
| ~~Ammonia (un-ionized NH3) hh~~ | ~~f,e~~ | ~~g,d~~ | ~~0.233h,e~~ | ~~0.035h,d~~ |

| ((Substance | Freshwater | | Marine Water | |
|---|---|---|---|---|
| | Acute | Chronic | Acute | Chronic |
| Arsenic dd | 360.0e | 190.0d | 69.0e,ll | 36.0d,ee,ll |
| Cadmium dd | i,e | j,d | 42.0e | 9.3d |
| Chlordane | 2.4a | 0.0043b | 0.09a | 0.004b |
| Chloride (Dissolved) k | 860.0h,e | 230.0h,d | - | - |
| Chlorine (Total Residual) | 19.0e | 11.0d | 13.0e | 7.5d |
| Chlorpyrifos | 0.083e | 0.041d | 0.011e | 0.0056d |
| Chromium (Hex) dd | 15.0e,l,ii | 10.0d,jj | 1,100.0e,l,ll | 50.0d,ll |
| Chromium (Tri) gg | m,e | n,d | - | - |
| Copper dd | e,e | p,d | 4.8e,ll | 3.1d,ll |
| Cyanide ee | 22.0e | 5.2d | 1.0e,mm | d,mm |
| DDT (and metabolites) | 1.1a | 0.001b | 0.13a | 0.001b |
| Dieldrin/Aldrin e | 2.5a | 0.0019b | 0.71a | 0.0019b |
| Endosulfan | 0.22a | 0.056b | 0.034a | 0.0087b |
| Endrin | 0.18a | 0.0023b | 0.037a | 0.0023b |
| Heptachlor | 0.52a | 0.0038b | 0.053a | 0.0036b |
| Hexachlorocyclohexane (Lindane) | 2.0a | 0.08b | 0.16a | - |
| Lead dd | q,e | r,d | 210.0e,ll | 8.1d,ll |
| Mercury s | 2.1e,kk,dd | 0.012d,ff | 1.8e,ll,dd | 0.025d,ff |
| Nickel dd | t,e | u,d | 74.0e,ll | 8.2d,ll |
| Parathion | 0.065e | 0.013d | - | - |
| Pentachlorophenol (PCP) | w,e | v,d | 13.0e | 7.9d |
| Polychlorinated Biphenyls (PCBs) | 2.0b | 0.014b | 10.0b | 0.030b |
| Selenium | 20.0e,ff | 5.0d,ff | 290e,ll,dd | 71.0d, x,ll,dd |
| Silver dd | y,a | - | 1.9a,ll | - |
| Toxaphene | 0.73e,z | 0.0002d | 0.21e,z | 0.0002d |
| Zinc dd | aa,e | bb,d | 90.0e,ll | 81.0d,ll |

Notes to Table 240(3):))

| Compound/Chemical | Chemical Abstracts Service (CAS)# | Category | Aquatic Life Criteria - Freshwater | | Aquatic Life Criteria - Marine Water | | Human Health Criteria for Consumption of: | |
|---|---|---|---|---|---|---|---|---|
| | | | Acute | Chronic | Acute | Chronic | Water & Organisms | Organisms Only |
| Metals: | | | | | | | | |
| Antimony | 7440360 | Metals, cyanide, and total phenols | | | | | 14 (A) | 180 |
| Arsenic | 7440382 | Metals, cyanide, and total phenols | 360.0 (c,dd) | 190.0 (d,dd) | 69.0 (c,ll,dd) | 36.0 (d,cc,ll,dd) | 10 (B) | 10 (B) |
| Asbestos | 1332214 | Toxic pollutants and hazardous substances | | | | | 7,000,000 fibers/L (D) | |
| Beryllium | 7440417 | Metals, cyanide, and total phenols | | | | | | |
| Cadmium | 7440439 | Metals, cyanide, and total phenols | (l,c,dd) | (l,c,dd) | 42.0 (c,dd) | 9.3 (d,dd) | | |
| Chromium (III) | 16065831 | Metals, cyanide, and total phenols | (m,c,gg) | (n,d,gg) | | | | |
| Chromium (VI) | 18540299 | Metals, cyanide, and total phenols | 15.0 (c,l,ii,dd) | 10.0 (d,jj,dd) | 1,100.0 (c,l,ll,dd) | 50.0 (d,ll,dd) | | |
| Copper | 7440508 | Metals, cyanide, and total phenols | (o,c,dd) | (p,d,dd) | 4.8 (c,ll,dd) | 3.1 (d,ll,dd) | 1,300 (D) | |

| Compound/Chemical | Chemical Abstracts Service (CAS)# | Category | Aquatic Life Criteria - Freshwater | | Aquatic Life Criteria - Marine Water | | Human Health Criteria for Consumption of: | |
|---|---|---|---|---|---|---|---|---|
| | | | Acute | Chronic | Acute | Chronic | Water & Organisms | Organisms Only |
| Lead | 7439921 | Metals, cyanide, and total phenols | (q,c,dd) | (r,d,dd) | 210.0 (c,ll,dd) | 8.1 (d,ll,dd) | | |
| Mercury | 7439976 | Metals, cyanide, and total phenols | 2.1 (c,kk,dd) | 0.012 (d,ff,s) | 1.8 (c,ll,dd) | 0.025 (d,ff,s) | (H) | (H) |
| Methylmercury | 22967926 | Nonconventional | | | | | | |
| Nickel | 7440020 | Metals, cyanide, and total phenols | (t,c,dd) | (u,d,dd) | 74.0 (c,ll,dd) | 8.2 (d,ll,dd) | 160 | 190 |
| Selenium | 7782492 | Metals, cyanide, and total phenols | 20.0 (c,ff) | 5.0 (d,ff) | 290 (c,ll,dd) | 71.0 (d,x,ll,dd) | 140 | 480 |
| Silver | 7440224 | Metals, cyanide, and total phenols | (y,a,dd) | | 1.9 (a,ll,dd) | | | |
| Thallium | 7440280 | Metals, cyanide, and total phenols | | | | | 0.24 | 0.27 |
| Zinc | 7440666 | Metals, cyanide, and total phenols | (aa,c,dd) | (bb,d,dd) | 90.0 (c,ll,dd) | 81.0 (d,ll,dd) | 2,300 | 2,900 |
| **Other chemicals:** | | | | | | | | |
| 1,1,1-Trichloroethane | 71556 | Volatile | | | | | | |
| 1,1,2,2-Tetrachloroethane | 79345 | Volatile | | | | | 0.17 (A, C) | 4.6 (C) |
| 1,1,2-Trichloroethane | 79005 | Volatile | | | | | 0.60 (A, C) | 18 (C) |
| 1,1-Dichloroethane | 75343 | Volatile | | | | | | |
| 1,1-Dichloroethylene | 75354 | Volatile | | | | | 0.057 (A) | 3.2 (A) |
| 1,2,4-Trichlorobenzene | 120821 | Base/neutral compounds | | | | | 36 | 40 |
| 1,2-Dichlorobenzene | 95501 | Volatile | | | | | 610 | 740 |
| 1,2-Dichloroethane | 107062 | Volatile | | | | | 0.38 (A, C) | 42 (C) |
| 1,2-Dichloropropane | 78875 | Volatile | | | | | 4.4 (C) | 17 (C) |
| 1,3-Dichloropropene | 542756 | Volatile | | | | | 10 (A) | 72 |
| 1,2-Diphenylhydrazine | 122667 | Base/neutral compounds | | | | | 0.040 (A, C) | 0.23 (C) |
| 1,2-Trans-Dichloroethylene | 156605 | Volatile | | | | | 700 | 5,800 |
| 1,3-Dichlorobenzene | 541731 | Volatile | | | | | 91 | 110 |
| 1,4-Dichlorobenzene | 106467 | Volatile | | | | | 91 | 110 |
| 2,3,7,8-TCDD (Dioxin) | 1746016 | Dioxin | | | | | 0.000000013 (A) | 0.000000014 (A) |
| 2,4,6-Trichlorophenol | 88062 | Acid compounds | | | | | 2.1 (A, C) | 2.8 (C) |
| 2,4-Dichlorophenol | 120832 | Acid compounds | | | | | 26 | 34 |
| 2,4-Dimethylphenol | 105679 | Acid compounds | | | | | 87 | 97 |
| 2,4-Dinitrophenol | 51285 | Acid compounds | | | | | 70 (A) | 610 |
| 2,4-Dinitrotoluene | 121142 | Base/neutral compounds | | | | | 0.11 (A, C) | 3.9 (C) |
| 2,6-Dinitrotoluene | 606202 | Base/neutral compounds | | | | | | |
| 2-Chloroethyvinyl Ether | 110758 | Volatile | | | | | | |
| 2-Chloronaphthalene | 91587 | Base/neutral compounds | | | | | 170 | 180 |
| 2-Chlorophenol | 95578 | Acid compounds | | | | | 16 | 17 |
| 2-Methyl-4,6-Dinitrophenol (4,6-dinitro-o-cresol) | 534521 | Acid compounds | | | | | 11 | 32 |
| 2-Nitrophenol | 88755 | Acid compounds | | | | | | |
| 3,3'-Dichlorobenzidine | 91941 | Base/neutral compounds | | | | | 0.031 (C) | 0.033 (C) |

| Compound/Chemical | Chemical Abstracts Service (CAS)# | Category | Aquatic Life Criteria - Freshwater | | Aquatic Life Criteria - Marine Water | | Human Health Criteria for Consumption of: | |
|---|---|---|---|---|---|---|---|---|
| | | | Acute | Chronic | Acute | Chronic | Water & Organisms | Organisms Only |
| 3-Methyl-4-Chlorophenol (parachlorometa cresol) | 59507 | Acid compounds | | | | | | |
| 4,4'-DDD | 72548 | Pesticides/PCBs | | | | | 0.00036 (C) | 0.00036 (C) |
| 4,4'-DDE | 72559 | Pesticides/PCBs | | | | | 0.00025 (C) | 0.00025 (C) |
| 4,4'-DDT | 50293 | Pesticides/PCBs | | | | | 0.00025 (C) | 0.00025 (C) |
| 4,4'-DDT(and metabolites) | | Pesticides/PCBs | 1.1 (a) | 0.001 (b) | 0.13 (a) | 0.001 (b) | | |
| 4-Bromophenyl Phenyl Ether | 101553 | Base/neutral compounds | | | | | | |
| 4-Chorophenyl Phenyl Ether | 7005723 | Base/neutral compounds | | | | | | |
| 4-Nitrophenol | 100027 | Acid compounds | | | | | | |
| Acenaphthene | 83329 | Base/neutral compounds | | | | | 110 | 110 |
| Acenaphthylene | 208968 | Base/neutral compounds | | | | | | |
| Acrolein | 107028 | Volatile | | | | | 1.0 | 1.1 |
| Acrylonitrile | 107131 | Volatile | | | | | 0.059 (A, C) | 0.28 (C) |
| Aldrin | 309002 | Pesticides/PCBs | 2.5 (a,e) | 0.0019 (b,e) | 0.71 (a,e) | 0.0019 (b,e) | 0.000057 (C) | 0.000058 (C) |
| alpha-BHC | 319846 | Pesticides/PCBs | | | | | 0.0039 (A, C) | 0.0056 (C) |
| alpha-Endosulfan | 959988 | Pesticides/PCBs | | | | | 0.93 (A) | 2.0 (A) |
| Anthracene | 120127 | Base/neutral compounds | | | | | 3,300 | 4,600 |
| Benzene | 71432 | Volatile | | | | | 1.2 (A, C) | 59 (C) |
| Benzidine | 92875 | Base/neutral compounds | | | | | 0.00012 (A, C) | 0.00023 (C) |
| Benzo(a) Anthracene | 56553 | Base/neutral compounds | | | | | 0.0028 (A, C) | 0.021 (C) |
| Benzo(a) Pyrene | 50328 | Base/neutral compounds | | | | | 0.0028 (A, C) | 0.021 (C) |
| Benzo(b) Fluoranthene | 205992 | Base/neutral compounds | | | | | 0.0028 (A, C) | 0.021 (C) |
| Benzo(ghi) Perylene | 191242 | Base/neutral compounds | | | | | | |
| Benzo(k) Fluoranthene | 207089 | Base/neutral compounds | | | | | 0.0028 (A, C) | 0.021 (C) |
| beta-BHC | 319857 | Pesticides/PCBs | | | | | 0.014 (A, C) | 0.020 (C) |
| beta-Endosulfan | 33213659 | Pesticides/PCBs | | | | | 0.93 (A) | 2.0 (A) |
| Bis(2-Chloroethoxy) Methane | 111911 | Base/neutral compounds | | | | | | |
| Bis(2-Chloroethyl) Ether | 111444 | Base/neutral compounds | | | | | 0.031 (A, C) | 0.60 (C) |
| Bis(2-Chloroisopropyl) Ether | 108601 | Base/neutral compounds | | | | | 1,300 | 7,400 |
| Bis(2-Ethylhexyl) Phthalate | 117817 | Base/neutral compounds | | | | | 1.8 (A, C) | 2.5 (C) |
| Bromoform | 75252 | Volatile | | | | | 4.3 (A, C) | 150 (C) |
| Butylbenzyl Phthalate | 85687 | Base/neutral compounds | | | | | 210 | 220 |
| Carbon Tetrachloride | 56235 | Volatile | | | | | 0.25 (A, C) | 1.9 (C) |

| Compound/Chemical | Chemical Abstracts Service (CAS)# | Category | Aquatic Life Criteria - Freshwater | | Aquatic Life Criteria - Marine Water | | Human Health Criteria for Consumption of: | |
|---|---|---|---|---|---|---|---|---|
| | | | Acute | Chronic | Acute | Chronic | Water & Organisms | Organisms Only |
| Chlordane | 57749 | Pesticides/PCBs | 2.4 (a) | 0.0043 (b) | 0.09 (a) | 0.004 (b) | 0.00057 (A, C) | 0.00059 (A, C) |
| Chlorobenzene | 108907 | Volatile | | | | | 420 | 890 |
| Chlorodibromomethane | 124481 | Volatile | | | | | 0.41 (A, C) | 15 (C) |
| Chloroethane | 75003 | Volatile | | | | | | |
| Chloroform | 67663 | Volatile | | | | | 5.7 (A) | 470 (A) |
| Chrysene | 218019 | Base/neutral compounds | | | | | 0.0028 (A, C) | 0.021 (C) |
| Cyanide | 57125 | Metals, cyanide, and total phenols | 22.0 (c,ee) | 5.2 (d,ee) | 1.0 (c,mm,ee) | (d,mm,ee) | 700 (A, E) | 9,100 (E) |
| delta-BHC | 319868 | Pesticides/PCBs | | | | | | |
| Dibenzo(a,h) Anthracene | 53703 | Base/neutral compounds | | | | | 0.0028 (A, C) | 0.021 (C) |
| Dichlorobromomethane | 75274 | Volatile | | | | | 0.27 (A, C) | 20 (C) |
| Dieldrin | 60571 | Pesticides/PCBs | 2.5 (a,e) | 0.0019 (b,e) | 0.71 (a,e) | 0.0019 (b,e) | 0.000061 (C) | 0.000061 (C) |
| Diethyl Phthalate | 84662 | Base/neutral compounds | | | | | 4,300 | 5,000 |
| Dimethyl Phthalate | 131113 | Base/neutral compounds | | | | | 96,000 | 130,000 |
| Di-n-Butyl Phthalate | 84742 | Base/neutral compounds | | | | | 460 | 510 |
| Di-n-Octyl Phthalate | 117840 | Base/neutral compounds | | | | | | |
| Endosulfan | | Pesticides/PCBs | 0.22 (a) | 0.056 (b) | 0.034 (a) | 0.0087 (b) | | |
| Endosulfan Sulfate | 1031078 | Pesticides/PCBs | | | | | 0.93 (A) | 2.0 (A) |
| Endrin | 72208 | Pesticides/PCBs | 0.18 (a) | 0.0023 (b) | 0.037 (a) | 0.0023 (b) | 0.034 | 0.035 |
| Endrin Aldehyde | 7421934 | Pesticides/PCBs | | | | | 0.034 | 0.035 |
| Ethylbenzene | 100414 | Volatile | | | | | 930 | 1,200 |
| Fluoranthene | 206440 | Base/neutral compounds | | | | | 16 | 16 |
| Fluorene | 86737 | Base/neutral compounds | | | | | 440 | 610 |
| Hexachlorocyclohexane (gamma-BHC; Lindane) | 58899 | Pesticides/PCBs | 2.0 (a) | 0.08 (b) | 0.16 (a) | | 0.019 (A) | 0.063 (A) |
| Heptachlor | 76448 | Pesticides/PCBs | 0.52 (a) | 0.0038 (b) | 0.053 (a) | 0.0036 (b) | 0.000091 (C) | 0.000091 (C) |
| Heptachlor Epoxide | 1024573 | Pesticides/PCBs | | | | | 0.000045 (C) | 0.000045 (C) |
| Hexachlorobenzene | 118741 | Base/neutral compounds | | | | | 0.00033 (C) | 0.00033 (C) |
| Hexachlorobutadiene | 87683 | Base/neutral compounds | | | | | 0.44 (A, C) | 21 (C) |
| Hexachlorocyclopentadiene | 77474 | Base/neutral compounds | | | | | 170 | 630 |
| Hexachloroethane | 67721 | Base/neutral compounds | | | | | 1.9 (A, C) | 3.8 (C) |
| Indeno(1,2,3-cd) Pyrene | 193395 | Base/neutral compounds | | | | | 0.0028 (A, C) | 0.021 (C) |
| Isophorone | 78591 | Base/neutral compounds | | | | | 8.4 (A, C) | 600 (A, C) |
| Methyl Bromide | 74839 | Volatile | | | | | 42 | 170 |
| Methyl Chloride | 74873 | Volatile | | | | | | |
| Methylene Chloride | 75092 | Volatile | | | | | 4.7 (A, C) | 680 (C) |

| Compound/Chemical | Chemical Abstracts Service (CAS)# | Category | Aquatic Life Criteria - Freshwater | | Aquatic Life Criteria - Marine Water | | Human Health Criteria for Consumption of: | |
|---|---|---|---|---|---|---|---|---|
| | | | Acute | Chronic | Acute | Chronic | Water & Organisms | Organisms Only |
| Napthalene | 91203 | Base/neutral compounds | | | | | | |
| Nitrobenzene | 98953 | Base/neutral compounds | | | | | 16 | 79 |
| N-Nitrosodimethylamine | 62759 | Base/neutral compounds | | | | | 0.00069 (A, C) | 3.4 (C) |
| N-Nitrosodi-n-Propylamine | 621647 | Base/neutral compounds | | | | | 0.052 (C) | 0.58 (C) |
| N-Nitrosodiphenylamine | 86306 | Base/neutral compounds | | | | | 5.0 (A, C) | 6.9 (C) |
| Pentachlorophenol (PCP) | 87865 | Acid compounds | (w,e) | (v,d) | 13.0 (e) | 7.9 (d) | 0.28 (A, C) | 3.5 (C) |
| Phenanthrene | 85018 | Base/neutral compounds | | | | | | |
| Phenol | 108952 | Acid compounds | | | | | 11,000 | 98,000 |
| Polychlorinated Biphenyls (PCBs) | | Pesticides/PCBs | 2.0 (b) | 0.014 (b) | 10.0 (b) | 0.030 (b) | 0.00017 (A, F) | 0.00017 (A, F) |
| Pyrene | 129000 | Base/neutral compounds | | | | | 330 | 460 |
| Tetrachloroethylene | 127184 | Volatile | | | | | 0.8 (A, C) | 3.8 (C) |
| Toluene | 108883 | Volatile | | | | | 4,100 | 8,500 |
| Toxaphene | 8001352 | Pesticides/PCBs | 0.73 (e,z) | 0.0002 (d) | 0.21 (e,z) | 0.0002 (d) | 0.00032 (C) | 0.00032 (C) |
| Trichloroethylene | 79016 | Volatile | | | | | 2.7 (A, C) | 34 (C) |
| Vinyl Chloride | 75014 | Volatile | | | | | 0.26 (C, G) | 2.8 (C, G) |
| Ammonia (hh) | | Nonconventional | (f,e) | (g,d) | 0.233 (h,e) | 0.035 (h,d) | | |
| Chloride (dissolved) (k) | | Nonconventional | 860.0 (h,e) | 230.0 (h,d) | | | | |
| Chlorine (total residual) | | Nonconventional | 19.0 (e) | 11.0 (d) | 13.0 (e) | 7.5 (d) | | |
| Chlorpyrifos | | Toxic pollutants and hazardous substances | 0.083 (e) | 0.041 (d) | 0.011 (e) | 0.0056 (d) | | |
| Parathion | | Toxic pollutants and hazardous substances | 0.065 (e) | 0.013 (d) | | | | |

Footnotes for aquatic life criteria in Table 240:

a. An instantaneous concentration not to be exceeded at any time.
b. A 24-hour average not to be exceeded.
c. A 1-hour average concentration not to be exceeded more than once every three years on the average.
d. A 4-day average concentration not to be exceeded more than once every three years on the average.
e. Aldrin is metabolically converted to Dieldrin. Therefore, the sum of the Aldrin and Dieldrin concentrations are compared with the Dieldrin criteria.
f. Shall not exceed the numerical value in total ammonia nitrogen (mg N/L) given by:

*For salmonids present:*

$$\frac{0.275}{1 + 10^{7.204-pH}} + \frac{39.0}{1 + 10^{pH-7.204}}$$

*For salmonids absent:*

$$\frac{0.411}{1 + 10^{7.204-pH}} + \frac{58.4}{1 + 10^{pH-7.204}}$$

g. Shall not exceed the numerical concentration calculated as follows:
Unionized ammonia concentration for waters where salmonid habitat is an existing or designated use:

$$0.80 \div (FT)(FPH)(RATIO)$$

where: RATIO = $13.5; 7.7 \leq pH \leq 9$

RATIO = $(20.25 \times 10^{(7.7-pH)}) \div (1 + 10^{(7.4-pH)}); 6.5 \leq pH \leq 7.7$

FT = 1.4; $15 \leq T \leq 30$

FT = $10^{[0.03(20-T)]}$; $0 \leq T \leq 15$

FPH = 1; $8 \leq pH \leq 9$

FPH = $(1 + 10^{(7.4-pH)}) \div 1.25$; $6.5 \leq pH \leq 8.0$

Total ammonia concentrations for waters where salmonid habitat is not an existing or designated use and other fish early life stages are absent:

$$Chronic\ Criterion = \left(\frac{0.0577}{1 + 10^{7.688-pH}} + \frac{2.487}{1 + 10^{pH-7.688}}\right) \times \left(1.45 \times 10^{0.028(25-A)}\right)$$

where: A = the greater of either T (temperature in degrees Celsius) or 7.

Applied as a thirty-day average concentration of total ammonia nitrogen (in mg N/L) not to be exceeded more than once every three years on average. The highest four-day average within the thirty-day period should not exceed 2.5 times the chronic criterion.

Total ammonia concentration for waters where salmonid habitat is not an existing or designated use and other fish early life stages are present:

$$Chronic\ Criterion = \left(\frac{0.0577}{1 + 10^{7.688-pH}} + \frac{2.487}{1 + 10^{pH-7.688}}\right) \times B$$

where: B = the lower of either 2.85, or $1.45 \times 10^{0.028 \times (25-T)}$, T = temperature in degrees Celsius.

Applied as a thirty-day average concentration of total ammonia nitrogen (in mg N/L) not to be exceeded more than once every three years on the average. The highest four-day average within the thirty-day period should not exceed 2.5 times the chronic criterion.

h. Measured in milligrams per liter rather than micrograms per liter.

i. $\leq (0.944)(e(1.128[\ln(\text{hardness})]-3.828))$ at hardness = 100. Conversion factor (CF) of 0.944 is hardness dependent. CF is calculated for other hardnesses as follows: CF = 1.136672 - [(ln hardness)(0.041838)].

j. $\leq (0.909)(e(0.7852[\ln(\text{hardness})]-3.490))$ at hardness = 100. Conversions factor (CF) of 0.909 is hardness dependent. CF is calculated for other hardnesses as follows: CF = 1.101672 - [(ln hardness)(0.041838)].

k. Criterion based on dissolved chloride in association with sodium. This criterion probably will not be adequately protective when the chloride is associated with potassium, calcium, or magnesium, rather than sodium.

l. Salinity dependent effects. At low salinity the 1-hour average may not be sufficiently protective.

m. $\leq (0.316)(e^{(0.8190[\ln(\text{hardness})] + 3.688)})$

n. $\leq (0.860)(e^{(0.8190[\ln(\text{hardness})] + 1.561)})$

o. $\leq (0.960)(e^{(0.9422[\ln(\text{hardness})] - 1.464)})$

p. $\leq (0.960)(e^{(0.8545[\ln(\text{hardness})] - 1.465)})$

q. $\leq (0.791)(e^{(1.273[\ln(\text{hardness})] - 1.460)})$ at hardness = 100. Conversion factor (CF) of 0.791 is hardness dependent. CF is calculated for other hardnesses as follows: CF = 1.46203 - [(ln hardness)(0.145712)].

r. $\leq (0.791)(e^{(1.273[\ln(\text{hardness})] - 4.705)})$ at hardness = 100. Conversion factor (CF) of 0.791 is hardness dependent. CF is calculated for other hardnesses as follows: CF = 1.46203 - [(ln hardness)(0.145712)].

s. If the four-day average chronic concentration is exceeded more than once in a three-year period, the edible portion of the consumed species should be analyzed. Said edible tissue concentrations shall not be allowed to exceed 1.0 mg/kg of methylmercury.

t. $\leq (0.998)(e^{(0.8460[\ln(\text{hardness})] + 3.3612)})$

u. $\leq (0.997)(e^{(0.8460[\ln(\text{hardness})] + 1.1645)})$

v. $\leq e^{[1.005(pH) - 5.290]}$

w. $\leq e^{[1.005(pH) - 4.830]}$

x. The status of the fish community should be monitored whenever the concentration of selenium exceeds 5.0 ug/ l in salt water.

y. $\leq (0.85)(e^{(1.72[\ln(\text{hardness})] - 6.52)})$

z. Channel Catfish may be more acutely sensitive.

aa. $\leq (0.978)(e^{(0.8473[\ln(\text{hardness})] + 0.8604)})$

bb. $\leq (0.986)(e^{(0.8473[\ln(\text{hardness})] + 0.7614)})$

cc. Nonlethal effects (growth, C-14 uptake, and chlorophyll production) to diatoms (*Thalassiosira aestivalis* and *Skeletonema costatum*) which are common to Washington's waters have been noted at levels below the established criteria. The importance of these effects to the diatom populations and the aquatic system is sufficiently in question to persuade the state to adopt the USEPA National Criteria value (36 µg/L) as the state threshold criteria, however, wherever practical the ambient concentrations should not be allowed to exceed a chronic marine concentration of 21 µg/L.

dd. These ambient criteria in the table are for the dissolved fraction. The cyanide criteria are based on the weak acid dissociable method. The metals criteria may not be used to calculate total recoverable effluent limits unless the seasonal partitioning of the dissolved to total metals in the ambient water are known. When this information is absent, these metals criteria shall be applied as total recoverable values, determined by back-calculation, using the conversion factors incorporated in the criterion equations. Metals criteria may be adjusted on a site-specific basis when data are made available to the department clearly demonstrating the effective use of the water effects ratio approach established by USEPA, as generally guided by the procedures in USEPA Water Quality Standards Handbook, December 1983, as supplemented or replaced by USEPA or ecology. Information which is used to develop effluent limits based on applying metals partitioning studies or the water effects ratio approach shall be identified in the permit fact sheet developed pursuant to WAC 173-220-060 or 173-226-110, as appropriate, and shall be made available for the public comment period required pursuant to WAC 173-220-050 or 173-226-130(3), as appropriate. Ecology has developed supplemental guidance for conducting water effect ratio studies.

ee. The criteria for cyanide is based on the weak acid dissociable method in the 19th Ed. Standard Methods for the Examination of Water and Wastewater, 4500-CN I, and as revised (see footnote dd, above).

ff. These criteria are based on the total-recoverable fraction of the metal.

gg. Where methods to measure trivalent chromium are unavailable, these criteria are to be represented by total-recoverable chromium.

hh. The listed fresh water criteria are based on un-ionized or total ammonia concentrations, while those for marine water are based on un-ionized ammonia concentrations. Tables for the conversion of total ammonia to un-ionized ammonia for freshwater can be found in the USEPA's Quality Criteria for Water, 1986. Criteria concentrations based on total ammonia for marine water can be found in USEPA Ambient Water Quality Criteria for Ammonia (Saltwater)-1989, EPA440/5-88-004, April 1989.

ii. The conversion factor used to calculate the dissolved metal concentration was 0.982.
jj. The conversion factor used to calculate the dissolved metal concentration was 0.962.
kk. The conversion factor used to calculate the dissolved metal concentration was 0.85.
ll. Marine conversion factors (CF) which were used for calculating dissolved metals concentrations are given below. Conversion factors are applicable to both acute and chronic criteria for all metals except mercury. The CF for mercury was applied to the acute criterion only and is not applicable to the chronic criterion. Conversion factors are already incorporated into the criteria in the table. Dissolved criterion = criterion x CF

| Metal | CF |
|---|---|
| Arsenic | 1.000 |
| Cadmium | 0.994 |
| Chromium (VI) | 0.993 |
| Copper | 0.83 |
| Lead | 0.951 |
| Mercury | 0.85 |
| Nickel | 0.990 |
| Selenium | 0.998 |
| Silver | 0.85 |
| Zinc | 0.946 |

mm. The cyanide criteria are: 2.8µg/l chronic and 9.1µg/l acute and are applicable only to waters which are east of a line from Point Roberts to Lawrence Point, to Green Point to Deception Pass; and south from Deception Pass and of a line from Partridge Point to Point Wilson. The chronic criterion applicable to the remainder of the marine waters is 1 µg/L.

((~~(4) USEPA Quality Criteria for Water, 1986, as revised, shall be used in the use and interpretation of the values listed in subsection (3) of this section.~~

~~(5) Concentrations of toxic, and other substances with toxic propensities not listed in subsection (3) of this section shall be determined in consideration of USEPA Quality Criteria for Water, 1986, and as revised, and other relevant information as appropriate. Human health based water quality criteria used by the state are contained in 40 C.F.R. 131.36 (known as the National Toxics Rule).~~

~~(6) Risk based criteria for carcinogenic substances shall be selected such that the upper bound excess cancer risk is less than or equal to one in one million.~~))

Footnotes for human health criteria in Table 240:

A. The value for this chemical was originally calculated based on cancer or noncancer risk, but because that calculation resulted in a higher concentration than that found in 40 C.F.R. 131.36, the criterion defaulted to the concentration found in 40 C.F.R. 131.36.
B. This criterion for total arsenic is the maximum contaminant level (MCL) developed under the Safe Drinking Water Act. The MCL for total arsenic is applied to surface waters where consumption of organisms-only and where consumption of water + organisms reflect the designated uses. When the department determines that a direct or indirect industrial discharge to surface waters designated for domestic water supply may be adding arsenic to its wastewater, the department will require the discharger to develop and implement a pollution prevention plan to reduce arsenic through the use of AKART. Industrial wastewater discharges to a privately or publicly owned wastewater treatment facility are considered indirect discharges.
C. This criterion was calculated based on an additional lifetime cancer risk of one in one hundred thousand ($1 \times 10^{-5}$ risk level). For some chemicals the criterion value defaulted from the risk-based concentration to the 40 C.F.R. 131.36 concentration, as indicated in footnote A. In these cases the additional lifetime cancer risk associated with the criterion is less than one in one hundred thousand.
D. This criterion is based on a regulatory level developed under the Safe Drinking Water Act.
E. This recommended water quality criterion is expressed as total cyanide, even though the integrated risk information system RfD used to derive the criterion is based on free cyanide. The multiple forms of cyanide that are present in ambient water have significant differences in toxicity due to their differing abilities to liberate the CN-moiety. Some complex cyanides require even more extreme conditions than refluxing with sulfuric acid to liberate the CN-moiety. Thus, these complex cyanides are expected to have little or no "bioavailability" to humans. If a substantial fraction of the cyanide present in a water body is present in a complexed form (e.g., Fe4[Fe(CN)6]3), this criterion may be overly conservative.
F. This criterion applies to total PCBs, (e.g., the sum of all congener or all isomer or homolog or Aroclor analyses). The PCBs criteria were calculated using a $4 \times 10^{-5}$ risk level, but because that calculation resulted in a higher concentration than that found in 40 C.F.R. 131.36, the criterion concentration defaulted to the concentration found in 40 C.F.R. 131.36, as indicated in footnote A.
G. This criterion was derived using the cancer slope factor of 1.4 (linearized multistage model with a twofold increase to 1.4 per mg/kg-day to account for continuous lifetime exposure from birth).
H. The human health criteria for mercury are contained in 40 C.F.R. 131.36.

AMENDATORY SECTION (Amending WSR 11-09-090, filed 4/20/11, effective 5/21/11)

**WAC 173-201A-420 Variance.** ((~~(1) The criteria established in WAC 173-201A-200 through 173-201A-260 and 173-201A-600 through 173-201A-612 may be modified for individual facilities, or stretches~~

~~of waters, through the use of a variance. Variances may be approved by the department when:~~

~~(a) The modification is consistent with the requirements of federal law (currently 40 C.F.R. 131.10(g) and 131.10(h));~~

~~(b) The water body is assigned variances for specific criteria and all other applicable criteria must be met; and~~

~~(c) Reasonable progress is being made toward meeting the original criteria.~~

~~(2) The decision to approve a variance is subject to a public and intergovernmental involvement process.~~

~~(3) The department may issue a variance for up to five years, and may renew the variance after providing for another opportunity for public and intergovernmental involvement and review.~~

~~(4) Variances are not in effect until they have been incorporated into this chapter and approved by the USEPA.~~)) (1) **General provisions.** The criteria established in WAC 173-201A-200 through 173-201A-260 and 173-201A-600 through 173-201A-612 may be modified for individual facilities, a group of facilities, or stretches of waters, through the use of a variance. The following conditions apply when considering issuance of a variance:

(a) A variance may be considered when the standards are expected to be attained by the end of the variance period or the attainable use cannot be reliably determined.

(b) The variance applies to specific parameters and all other applicable standards remain in effect for the water body.

(c) The modification must be consistent with the requirements of federal regulations (currently 40 C.F.R. 131.10).

(d) Reasonable progress must be made toward meeting the original standards during the variance period.

(e) A variance renewal may be considered if the renewal request meets the above conditions.

(2) **Types of variances.** Upon request or on its own initiative, the department will consider granting the following types of variances to existing water quality standards:

(a) An individual variance is a designated use and parameter-specific change to the standard(s) of the receiving water body for a specific discharger. The temporary standard(s) only apply at the point(s) of compliance for the individual facility.

(b) A multidischarger variance is a designated use and parameter-specific change to the standard(s) of any water body that receives discharges from a permitted facility defined within the scope of the multidischarger variance. Any permitted discharger that is defined within the scope of the variance may be covered under the variance that is granted by the department, provided all requirements of the variance for that discharger are met.

(c) A water body variance is a designated use and parameter-specific change to the standard(s) for a stretch of waters. Any discharger of the specific parameter that is defined within the geographic scope of the water body variance may be covered under the variance that is granted by the department, provided all requirements of the variance for that discharger are met.

(3) **Requirements.** Any entity initiating a variance request or applying for coverage for an individual, multidischarger, or water body variance must submit the following information to the department:

(a) The pollutant(s) and designated use(s) proposed to be modified by the variance, and the proposed duration of the variance.

(b) 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 40 C.F.R. 131.10.

(c) An evaluation of treatment or alternative actions that were considered to meet effluent limits based on the original water quality criteria, and a description of why these options are not technically, economically, or otherwise feasible.

(d) Sufficient water quality data and analyses to characterize receiving and discharge water pollutant concentrations.

(e) A description and schedule of actions that the discharger(s) proposes to ensure the original water quality standard(s) are met or the highest attainable use is attained within the variance period. Dischargers are also required to submit a schedule for development and implementation of a pollutant minimization plan for the subject pollutant(s).

(f) If the variance is for a water body or stretch of water, the following information must also be provided to the department:

(i) The results from a pollutant source assessment that quantifies the contribution of pollution from permitted sources and nonpermitted sources;

(ii) All cost-effective and reasonable best management practices for permitted sources that address the pollutant the variance is based upon; and

(iii) Best management practices for nonpermitted sources that meet the requirements of chapter 90.48 RCW.

(g) Any additional information the department deems necessary to evaluate the application.

(4) **Public review and notification.** The decision to grant a variance is a formal rule making subject to a public and intergovernmental involvement process.

(a) The department will provide notice of the proposed variance and consult with Indian tribes or other states that have jurisdiction over adjacent and downstream waters of the proposed variance.

(b) The department shall maintain and make publicly available a list of dischargers that are covered under the variances that are in effect.

(5) **Period during which the variance is in effect.** A variance is a temporary modification to the designated use and associated water quality criteria.

(a) Each variance will be granted for the minimum time estimated to meet the original standard(s) or, if during the period of the variance it is determined that a designated use cannot be attained, then a use attainability analysis (WAC 173-201A-440) will be initiated.

(b) The ability to apply a variance in permits or other actions may be terminated by the department as a result of a mandatory interim review.

(c) Variances are in effect after they have been incorporated into this chapter and approved by the USEPA.

(6) **Contents of a variance.** At a minimum a variance adopted into rule will include the following:

(a) The time period for which the variance is applicable.

(b) The geographic area or specific waters in which the variance is applicable.

(c) A description of the permitted and unpermitted dischargers covered by the variance.

(d) Identification of required actions and a schedule, including any measurable milestones, for all pollution sources (permitted and unpermitted) subject to the variance. Dischargers are required to use adaptive management to fine tune and update actions, schedules, and milestones in order to achieve the goals of the variance.

(e) A provision allowing the department to reopen and modify any permits and to revise BMP requirements for unpermitted dischargers as a result of the mandatory interim review of the variance (see subsection (8) of this section).

(7) **Variance permit conditions.** The department must establish and incorporate into NPDES permits all conditions necessary to implement and enforce an approved variance, including:

(a) Effluent limits that represent currently achieved or achievable effluent conditions, or effluent limits that are sufficient to meet the original water quality standard upon expiration of the variance;

(b) Monitoring and reporting requirements; and

(c) A provision allowing the department to reopen and modify the permits based on the mandatory interim review of the variance.

(8) **Mandatory interim review.** The department will conduct an interim review of each variance at least once every five years after the variance is adopted and approved to determine that conditions of the variance are being met and to evaluate whether the variance is still necessary.

(a) Review process for individual discharger and multidischarger variances:

(i) The review shall be coordinated with the public review process of the permit renewal if the variance is being implemented in a permit.

(ii) The review will be focused on the discharger's compliance with permit conditions that are required by the variance as well as an evaluation of whether the variance is still necessary.

(b) Review process for water body variances:

(i) Variances for stretches of waters will be reviewed in a public process conducted by the department every five years after initial adoption of the variance into rule.

(ii) The review will evaluate whether the variance is still necessary, any new information on sources of the pollutant that indicates that reductions could be made that would allow water quality standards to be met in a shorter time frame, as well as any new information that indicates water quality improvements may require more time.

(c) A variance that applies to a permit will be shortened or terminated if the review determines that:

(i) The conditions and requirements of the variance and associated permit requirements have not been complied with unless reasons outside the control of the discharger prevented meeting any condition or requirement; or

(ii) Water quality standards could be met in a shorter time frame, based on new information submitted to the department.

NEW SECTION

**WAC 173-201A-460 Intake credits.** (1) **General provisions.** The following provisions apply to the consideration of intake credits in

determining reasonable potential and establishing water quality based effluent limits (WQBELs) for waste discharge permits issued pursuant to the National Pollutant Discharge Elimination System.

(a) An "intake pollutant" is the amount of a pollutant that is present in public waters (including groundwater as provided in (d) of this subsection) at the time water is removed from the same body of water by the discharger or other facility supplying the discharger with intake water.

(b) An intake pollutant must be from the "same body of water" as the discharge in order to be eligible for an intake credit. 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 will be 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; and

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

(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.

(2) **Consideration of intake pollutants.**

(a) The department may determine if there is reasonable potential for the discharge of an identified intake pollutant to cause or contribute to an exceedance of a narrative or numeric water quality criterion. If a reasonable potential exists, then water quality-based effluent limits may be established where a discharger demonstrates that the following conditions are met:

(i) The facility removes the intake water containing the pollutant from the same body of water into which the discharge is made;

(ii) The ambient background concentration of the pollutant does not meet the most stringent applicable water quality criterion for that pollutant;

(iii) 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 had not been removed from the body of water;

(iv) 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 had not been removed from the body of water;

(v) For the purpose of determining reasonable potential, the facility does not contribute any additional mass of the identified intake pollutant to its wastewater; and

(vi) For the purpose of determining water quality-based effluent limits; the facility does not increase the identified intake pollutant concentration at the point of discharge as compared to the pollutant concentration in the 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.

(b) Upon a finding under (a) of this subsection that an intake pollutant in the discharge does not cause, has the reasonable potential to cause, or contribute to an exceedance of 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.

(c) 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.

(d) 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 limit reflecting the flow-weighted amount of each source of the pollutant provided that conditions in (a) through (c) of this subsection are met and adequate monitoring to determine compliance can be established and is included in the permit.

AMENDATORY SECTION (Amending WSR 03-14-129, filed 7/1/03, effective 8/1/03)

**WAC 173-201A-510 Means of implementation.** (1) **Permitting.** The primary means to be used for controlling municipal, commercial, and industrial waste discharges shall be through the issuance of waste discharge permits, as provided for in RCW 90.48.160, 90.48.162, and 90.48.260. Waste discharge permits, whether issued pursuant to the National Pollutant Discharge Elimination System or otherwise, must be conditioned so the discharges authorized will meet the water quality standards. No waste discharge permit can be issued that causes or contributes to a violation of water quality criteria, except as provided for in this chapter.

(a) Persons discharging wastes in compliance with the terms and conditions of permits are not subject to civil and criminal penalties on the basis that the discharge violates water quality standards.

(b) Permits must be modified by the department when it is determined that the discharge causes or contributes to a violation of water quality standards. Major modification of permits is subject to review in the same manner as the originally issued permits.

(2) **Miscellaneous waste discharge or water quality effect sources.** The director shall, through the issuance of regulatory permits, directives, and orders, as are appropriate, control miscellaneous waste discharges and water quality effect sources not covered by subsection (1) of this section.

(3) **Nonpoint source and storm water pollution.**

(a) Activities which generate nonpoint source pollution shall be conducted so as to comply with the water quality standards. The primary means to be used for requiring compliance with the standards shall be through best management practices required in waste discharge permits, rules, orders, and directives issued by the department for activities which generate nonpoint source pollution.

(b) Best management practices shall be applied so that when all appropriate combinations of individual best management practices are utilized, violation of water quality criteria shall be prevented. If a discharger is applying all best management practices appropriate or required by the department and a violation of water quality criteria occurs, the discharger shall modify existing practices or apply further water pollution control measures, selected or approved by the department, to achieve compliance with water quality criteria. Best management practices established in permits, orders, rules, or directives of the department shall be reviewed and modified, as appropriate, so as to achieve compliance with water quality criteria.

(c) Activities which contribute to nonpoint source pollution shall be conducted utilizing best management practices to prevent violation of water quality criteria. When applicable best management practices are not being implemented, the department may conclude individual activities are causing pollution in violation of RCW 90.48.080. In these situations, the department may pursue orders, directives, permits, or civil or criminal sanctions to gain compliance with the standards.

(d) Activities which cause pollution of storm water shall be conducted so as to comply with the water quality standards. The primary means to be used for requiring compliance with the standards shall be through best management practices required in waste discharge permits, rules, orders, and directives issued by the department for activities which generate storm water pollution. The consideration and control procedures in (b) and (c) of this subsection apply to the control of pollutants in storm water.

(4) **General allowance for compliance schedules.**

(a) Permits((~~,~~)) and orders((~~, and directives of~~)) issued by the department for existing discharges may include a schedule for achieving compliance with effluent limits and water quality ((~~criteria contained in this chapter~~)) standards that apply to:

(i) Aquatic life uses; and

(ii) Uses other than aquatic life.

((~~Such~~)) (b) Schedules of compliance shall be developed to ensure final compliance with all water quality-based effluent limits and the water quality standards in the shortest practicable time. ((~~Decisions regarding~~)) The department will decide whether to issue schedules of compliance ((~~will be made~~)) on a case-by-case basis ((~~by the department~~)). Schedules of compliance may not be issued for new discharges. Examples of schedules of compliance that may be issued ((~~to allow for~~)) include:

(i) Construction of necessary treatment capability;

(ii) Implementation of necessary best management practices;

(iii) Implementation of additional storm water best management practices for discharges determined not to meet water quality ((~~criteria~~)) standards following implementation of an initial set of best management practices; and

(iv) Completion of necessary water quality studies((~~, or (v) resolution of a pending water quality standards' issue through rule making action~~)) related to implementation of permit requirements to meet effluent limits.

((~~(b)~~)) (c) For the period of time during which compliance with water quality ((~~criteria~~)) standards is deferred, interim effluent ((~~limitations~~)) limits shall be formally established, based on the best professional judgment of the department. Interim effluent ((~~limitations~~)) limits may be numeric or nonnumeric (e.g., construction of

necessary facilities by a specified date as contained in an ((~~ecology~~)) order or permit), or both.

((~~(c)~~)) (d) Prior to establishing a schedule of compliance, the department shall require the discharger to evaluate the possibility of achieving water quality ((~~criteria~~)) standards via nonconstruction changes (e.g., facility operation, pollution prevention). Schedules of ~~compliance ((may in no case exceed ten years, and))~~ shall meet requirements in WAC 173-220-140 and shall require compliance with the specified requirements as soon as practicable. Compliance schedules shall generally not exceed the term of any permit unless the department determines that a longer time period is needed to come into compliance with the applicable water quality standards.

(e) When an approved total maximum daily load, or TMDL, has established waste load allocations for permitted dischargers, a longer period of time for a compliance schedule may be authorized if the department has determined that:

(i) The permittee is not able to meet its waste load allocation in the TMDL solely by controlling and treating its own effluent;

(ii) The permittee has made significant progress to reduce pollutant loading during the term of the permit;

(iii) The permittee is meeting all of its requirements under the TMDL as soon as possible; and

(iv) Actions specified in the compliance schedule are sufficient to achieve water quality standards as soon as possible.

(5) **Compliance schedules for dams:**

(a) All dams in the state of Washington must comply with the provisions of this chapter.

(b) For dams that cause or contribute to a violation of the water quality standards, the dam owner must develop a water quality attainment plan that provides a detailed strategy for achieving compliance. The plan must include:

(i) A compliance schedule that does not exceed ten years;

(ii) Identification of all reasonable and feasible improvements that could be used to meet standards, or if meeting the standards is not attainable, then to achieve the highest attainable level of improvement;

(iii) Any department-approved gas abatement plan as described in WAC 173-201A-200 (1)(f)(ii);

(iv) Analytical methods that will be used to evaluate all reasonable and feasible improvements;

(v) Water quality monitoring, which will be used by the department to track the progress in achieving compliance with the state water quality standards; and

(vi) Benchmarks and reporting sufficient for the department to track the applicant's progress toward implementing the plan within the designated time period.

(c) The plan must ensure compliance with all applicable water quality criteria, as well as any other requirements established by the department (such as through a total maximum daily load, or TMDL, analysis).

(d) If the department is acting on an application for a water quality certification, the approved water quality attainment plan may be used by the department in its determination that there is reasonable assurance that the dam will not cause or contribute to a violation of the water quality standards.

(e) When evaluating compliance with the plan, the department will allow the use of models and engineering estimates to approximate design success in meeting the standards.

(f) If reasonable progress toward implementing the plan is not occurring in accordance with the designated time frame, the department may declare the project in violation of the water quality standards and any associated water quality certification.

(g) If an applicable water quality standard is not met by the end of the time provided in the attainment plan, or after completion of all reasonable and feasible improvements, the owner must take the following steps:

(i) Evaluate any new reasonable and feasible technologies that have been developed (such as new operational or structural modifications) to achieve compliance with the standards, and develop a new compliance schedule to evaluate and incorporate the new technology;

(ii) After this evaluation, if no new reasonable and feasible improvements have been identified, then propose an alternative to achieve compliance with the standards, such as site specific criteria (WAC 173-201A-430), a use attainability analysis (WAC 173-201A-440), or a water quality offset (WAC 173-201A-450).

(h) New dams, and any modifications to existing facilities that do not comply with a gas abatement or other pollution control plan established to meet criteria for the water body, must comply with the water quality standards at the time of project completion.

(i) Structural changes made as a part of a department approved gas abatement plan to aid fish passage, described in WAC 173-201A-200 (1)(f)(ii), may result in system performance limitations in meeting water quality criteria for that parameter at other times of the year.