

(a) To call any person(s) as a witness who may have information regarding the case;

(b) To view the material to be presented against them in advance of the hearing;

(c) To hear the testimony of all witnesses;

(d) To present questions to be asked of all witnesses; and

(e) To have a record made of the hearing.

(3) The burden of proof rests with the accuser. This burden shall be carried if guilt is indicated by a fair preponderance of the evidence when considered as a whole.

[Statutory Authority: RCW 28B.35.120. 97-06-095, § 172-120-140, filed 3/4/97, effective 4/4/97. Statutory Authority: RCW 28B.35.120 and 43.21C.120. 87-20-056 (Order 87-01), § 172-120-140, filed 10/2/87. Statutory Authority: RCW 28B.35.120. 81-06-023 (Order 1-22-81), § 172-120-140, filed 2/25/81; Order 76-9-1, § 172-120-140, filed 9/23/76.]

**WAC 172-120-150 Repealed.** See Disposition Table at beginning of this chapter.

## Title 173 WAC ECOLOGY, DEPARTMENT OF

### Chapters

- 173-22 Adoption of designations of shorelands and wetlands associated with shorelines of the state.
- 173-32 Allocation of financial aid to counties and cities to assist in comprehensive planning for solid waste management.
- 173-90 Standards and limitations on the use of clean water funds for pollution abatement.
- 173-95A Uses and limitations of centennial clean water funds.
- 173-201A Water quality standards for surface waters of the state of Washington.
- 173-223 Interim wastewater discharge permit fees.
- 173-309 Hazardous Waste Cleanup Act—Local toxics control account—Interim financial assistance program.
- 173-311 Moderate risk waste grants.
- 173-315 Model Toxics Control Act—Local toxics control account—Interim financial assistance program.
- 173-318 Phase one—Waste reduction and recycling grants.
- 173-319 Comprehensive waste reduction/recycling grants program.
- 173-400 General regulations for air pollution sources.
- 173-401 Operating permit regulation.
- 173-430 Agricultural burning.
- 173-491 Emission standards and controls for sources emitting gasoline vapors.

### Chapter 173-22 WAC

#### ADOPTION OF DESIGNATIONS OF SHORELANDS AND WETLANDS ASSOCIATED WITH SHORELINES OF THE STATE

#### WAC

173-22-015	Repealed.
173-22-030	Definitions.
173-22-035	Wetland identification and delineation.
173-22-040	Shoreland area designation criteria.
173-22-070	Lands within federal boundaries.
173-22-080	Wetland delineation manual.

#### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

173-22-015	Relationship to National Coastal Zone Management Act of 1972. [Order DE 73-11, § 173-22-015, filed 7/20/73.] Repealed by 97-04-076 (Order 96-12), filed 2/5/97, effective 3/8/97. Statutory Authority: RCW 90.58.140(3) and [90.58].200.
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**WAC 173-22-015 Repealed.** See Disposition Table at beginning of this chapter.

**WAC 173-22-030 Definitions.** As used herein, the following words have the following meanings:

(1) "Associated wetlands" means those wetlands which are in proximity to and either influence or are influenced by tidal waters or a lake or stream subject to the Shoreline Management Act;

(2) "Atypical situation" as used herein, refers to areas in which one or more parameters (vegetation, soil, and/or hydrology) have been sufficiently altered by recent human activities or natural events to preclude the presence of wetland indicators of the parameter. Recent refers to the period of time since legal jurisdiction of an applicable law or regulation took effect;

(3) "Duration (inundation/soil saturation)" means the length of time during which water stands at or above the soil surface (inundation), or during which the soil is saturated. As used herein, duration refers to a period during the growing season;

(4) "Flood plain" is synonymous with one hundred-year floodplain and means that land area susceptible to being inundated by stream derived waters with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation maps or a reasonable method which meets the objectives of the act;

(5) "Floodway" means those portions of the area of a river valley lying streamward from the outer limits of a watercourse upon which flood waters are carried during periods of flooding that occur with reasonable regularity, although not necessarily annually, said floodway being identified, under normal condition, by changes in surface soil conditions or changes in types or quality of vegetative ground cover condition. The floodway shall not include those lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under license from the federal government, the state, or a political subdivision of the state. The limit of the floodway is that which has been established in flood regula-

tion ordinance maps or by a reasonable method which meets the objectives of the act;

(6) "Growing season" means the portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biologic zero (5°C);

(7) "Hydrophytic vegetation" means the sum total of macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. When hydrophytic vegetation comprises a community where indicators of hydric soils and wetland hydrology also occur, the area has wetland vegetation;

(8) "Hydric soil" means soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part;

(9) "Lake" means a body of standing water in a depression of land or expanded part of a river, including reservoirs, of twenty acres or greater in total area. A lake is bounded by the ordinary high water mark or, where a stream enters a lake, the extension of the elevation of the lake's ordinary high water mark within the stream;

(10) "Long duration" means a period of inundation from a single event that ranges from seven days to one month.

(11) "Ordinary high water mark" on all lakes, streams, and tidal water is that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the department. The following criteria clarify this mark on tidal waters, lakes, and streams:

(a) Tidal waters.

(i) In high energy environments where the action of waves or currents is sufficient to prevent vegetation establishment below mean higher high tide, the ordinary high water mark is coincident with the line of vegetation. Where there is no vegetative cover for less than one hundred feet parallel to the shoreline, the ordinary high water mark is the average tidal elevation of the adjacent lines of vegetation. Where the ordinary high water mark cannot be found, it is the elevation of mean higher high tide;

(ii) In low energy environments where the action of waves and currents is not sufficient to prevent vegetation establishment below mean higher high tide, the ordinary high water mark is coincident with the landward limit of salt tolerant vegetation. "Salt tolerant vegetation" means vegetation which is tolerant of interstitial soil salinities greater than or equal to 0.5 parts per thousand;

(b) Lakes. Where the ordinary high water mark cannot be found, it shall be the line of mean high water;

(c) Streams. Where the ordinary high water mark cannot be found, it shall be the line of mean high water. For braided streams, the ordinary high water mark is found on the banks forming the outer limits of the depression within which the braiding occurs;

(12) "Prevalent vegetation" means the plant community or communities that occur in an area during a given period.

The prevalent vegetation is characterized by the dominant macrophytic species that comprise the plant community;

(13) "River delta" means those lands formed as an aggradational feature by stratified clay, silt, sand and gravel deposited at the mouths of streams where they enter a quieter body of water. The upstream extent of a river delta is that limit where it no longer forms distributary channels;

(14) "Shorelands" or "shoreland areas" means those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location by the department of ecology. Any county or city may determine that portion of a one-hundred-year-flood plain to be included in its master program as long as such portion includes, as a minimum, the floodway and the adjacent land extending landward two hundred feet therefrom;

(15) A "stream" is a naturally occurring body of periodic or continuously flowing water where:

(a) The mean annual flow is greater than twenty cubic feet per second; and

(b) The water is contained within a channel. A channel is an open conduit either naturally or artificially created. This definition does not include artificially created irrigation, return flow, or stockwatering channels;

(16) "Tidal water" includes marine and estuarine waters bounded by the ordinary high water mark. Where a stream enters the tidal water, the tidal water is bounded by the extension of the elevation of the marine ordinary high water mark within the stream;

(17) "Typically adapted" is a term that refers to a species being normally or commonly suited to a given set of environmental conditions, due to some feature of its morphology, physiology, or reproduction;

(18) "Very long duration" means a period of inundation from a single event that is greater than one month.

(19) "Wetlands" or "wetland areas" means areas that are inundated or saturated by surface 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; and

(20) The definitions set forth in chapter 90.58 RCW shall also apply as used herein.

[Statutory Authority: RCW 90.58.140(3) and [90.58].200. 97-04-076 (Order 96-12), § 173-22-030, filed 2/5/97, effective 3/8/97. Statutory Authority: Chapter 90.58 RCW. 86-12-011 (Order 86-06), § 173-22-030, filed 5/23/86. Statutory Authority: RCW 90.58.030 (2)(f), 90.58.120, and 90.58.200. 80-08-086 (Order DE 80-22), § 173-22-030, filed 7/2/80; Order

DE 73-11, § 173-22-030, filed 7/20/73; Order DE 72-15, § 173-22-030, filed 6/30/72.]

**WAC 173-22-035 Wetland identification and delineation.** Identification of wetlands and delineation of their boundaries pursuant to this chapter shall be done in accordance with the criteria and indicators listed in WAC 173-22-080. These criteria and indicators along with recommended methods and additional background information can be found in the Washington State Wetland Identification and Delineation Manual, Ecology Publication # 96-94.

[Statutory Authority: RCW 90.58.140(3) and [90.58].200. 97-04-076 (Order 96-12), § 173-22-035, filed 2/5/97, effective 3/8/97.]

**WAC 173-22-040 Shoreland area designation criteria.** The following criteria contain the standards for the department's designation of shoreland areas associated with shorelines of the state which are subject to the jurisdiction of chapter 90.58 RCW:

(1) Tidal waters. The shoreland area shall include:

(a) Those lands which extend landward two hundred feet as measured on a horizontal plane from the ordinary high water mark; and

(b) Those wetlands which are in proximity to and either influence or are influenced by the tidal water. This influence includes but is not limited to one or more of the following: Periodic tidal inundation; hydraulic continuity; formation by tidally influenced geohydraulic processes; or a surface connection through a culvert or tide gate;

(2) Lakes. The shoreland area shall include:

(a) Those lands which extend landward two hundred feet as measured on a horizontal plane from the ordinary high water mark; and

(b) Those wetlands which are in proximity to and either influence or are influenced by the lake. This influence includes but is not limited to one or more of the following: Periodic inundation or hydraulic continuity;

(3) Streams. The shoreland area shall include the greater of:

(a) Those lands which extend landward two hundred feet as measured on a horizontal plane from the ordinary high water mark;

(b) Those floodplains which extend landward two hundred feet as measured on a horizontal plane from the floodway: *Provided*, That local government may, at its discretion, include all or a larger portion of the one hundred-year floodplain within the associated shorelands. Designation of this shoreland area shall be in accordance with chapter 173-19 WAC, the state master program. If the applicable master program does not designate the shoreland area for a stream, it shall be designated under the rules which applied at the time of adoption by the department;

(c) Those wetlands which are in proximity to and either influence or are influenced by the stream. This influence includes but is not limited to one or more of the following: Periodic inundation; location within a floodplain; or hydraulic continuity; and

(d) Those lands within a river delta floodplain except for those lands that can reasonably be expected to be protected from flood waters by flood control devices

maintained by or maintained under license from the federal government, the state, or a political subdivision of the state.

[Statutory Authority: RCW 90.58.140(3) and [90.58].200. 97-04-076 (Order 96-12), § 173-22-040, filed 2/5/97, effective 3/8/97. Statutory Authority: Chapter 90.58 RCW. 86-12-011 (Order 86-06), § 173-22-040, filed 5/23/86. Statutory Authority: RCW 90.58.030, 90.58.120 and 90.58.200. 85-09-043 (Order DE 85-05), § 173-22-040, filed 4/15/85. Statutory Authority: RCW 90.58.030 (2)(f), 90.58.120, and 90.58.200. 80-08-086 (Order DE 80-22), § 173-22-040, filed 7/2/80; Order DE 76-30, § 173-22-040, filed 7/27/76; Order DE 73-11, § 173-22-040, filed 7/20/73; Order DE 72-15, § 173-22-040, filed 6/30/72.]

**WAC 173-22-070 Lands within federal boundaries.** In addition to those designations contained in the appendix, those nonfederal lands lying within the exterior boundaries of federal lands and those federal lands leased by the federal government to other persons, which lands fall within the definition of shorelands contained herein, shall also be subject to the jurisdiction of chapter 90.58 RCW.

[Statutory Authority: RCW 90.58.140(3) and [90.58].200. 97-04-076 (Order 96-12), § 173-22-070, filed 2/5/97, effective 3/8/97; Order DE 73-11, § 173-22-070, filed 7/20/73; Order DE 72-15, § 173-22-070, filed 6/30/72.]

**WAC 173-22-080 Wetland delineation manual.** The department has prepared a Washington State Wetland Identification and Delineation Manual (Ecology publication # 96-94) to be used in implementing these regulations. The mandatory portions of this manual are adopted into the following regulations. In addition, the manual contains background information, guidance, examples, and methods which may be useful in applying these regulations. The manual is intended to be used in implementing the Shoreline Management Act and other applicable state statutes. The manual is also to be used by local governments in implementing local regulations under the Growth Management Act (chapter 36.70A RCW).

The state manual takes the original 1987 Corps of Engineers manual and incorporates the changes made by the federal government to the 1987 manual since that time. This includes the national guidance issued by the Corps in 1991 and 1992, and the regional guidance issued by the Corps and EPA in 1994. All other changes are of two types:

Additional language added to assist the user in applying the manual to the variety of situations found in the state of Washington; or

Deletion of geographic material or references irrelevant to Washington.

Since the original 1987 manual was developed for use throughout the United States, it contains many references that do not apply to our state. Where appropriate, references to species or situations found in Washington have been added.

(1) Wetland delineation. Purpose and introduction.

It is the purpose of a delineation manual to provide information and methods that will allow a delineator to make an accurate wetland delineation at any time of the year. However, it must be recognized that some wetlands will be more difficult to delineate than others and that all information collected must be used in conjunction with the knowledge and experience of the delineator. The proper collection and recording of field and other supporting data is one of the most critical aspects of any wetland delineation. The

wetland delineation regulations are intended to identify areas that meet the definition of wetlands found in state law. They are also intended to identify the same areas identified in the Corps of Engineers 1987 Wetlands Delineation Manual, as amended and augmented by official federal guidance issued through January 1995.

The technical approach for identifying and delineating wetlands does not constitute a classification system. It provides a basis for determining whether a given area is a wetland for purposes of federal, state and local regulations without attempting to classify it by wetland type.

Certain wetland types, under the extremes of normal seasonal or annual variability, may not always meet all the wetland criteria defined in the manual. Examples include vernal wetlands during drought years and seasonal wetlands that may lack hydrophytic vegetation and/or wetland hydrology during the dry season. Such areas are discussed in subsection (12) of this section (**Problem Areas**), and guidance is provided for making wetland determinations in these areas.

Three key provisions of the definition of wetlands include:

(a) Inundated or saturated soil conditions resulting from permanent or periodic inundation or saturation by ground water or surface water.

(b) A prevalence of vegetation typically adapted for life in saturated soil conditions (hydrophytic vegetation).

(c) The presence of "normal circumstances."

Explicit in the definition is the consideration of three environmental parameters: Hydrology, soil, and vegetation. Positive wetland indicators of all three parameters are normally present in wetlands. Although vegetation is often the most readily observed parameter, sole reliance on vegetation or either of the other parameters as the determinant of wetlands can sometimes be misleading. Many plant species can grow successfully in both wetlands and nonwetlands, and hydrophytic vegetation and hydric soils may persist for decades following alteration of hydrology that will render an area a nonwetland. The presence of hydric soils and wetland hydrology indicators in addition to vegetation indicators will provide a logical, easily defensible, and technical basis for the presence of wetlands. The combined use of indicators for all three parameters will enhance the technical accuracy, consistency, and credibility of wetland determinations. Therefore, all three parameters were used in developing the criteria for wetlands and all approaches for applying the criteria embody the multiparameter concept.

The procedures described in the methods section of the state delineation manual have been tested and found to be reliable. However, these methods are recommendations and are not mandatory. Site-specific conditions may require modification of field procedures. The user has the flexibility to employ sampling procedures other than those described. However, the basic approach for making wetland determinations should not be altered (i.e., the determination should be based on the dominant plant species, soil characteristics, and hydrologic characteristics of the area in question). The user should document reasons for using a different characterization procedure than described in the state manual. *CAUTION: Application of methods described in the manual or the*

*modified sampling procedures requires that the user be familiar with wetlands of the area and use his/her training, experience, and good judgment in making wetland determinations.*

(2) Wetland identification and delineation. Technical criteria. The interaction of hydrology, vegetation, and soil results in the development of characteristics unique to wetlands. Therefore, the following criteria for wetlands are based on these three parameters.

The definition of wetlands (WAC 173-22-030) includes the language found in the federal Clean Water Act regulations. It also includes additional language found in the Shoreline Management Act and Growth Management Act which specifically excludes several types of "artificial" wetlands. Many of these areas specifically excluded in the definition will meet the technical requirements for being a wetland (i.e., will meet all three criteria). The delineation manual identifies all areas that meet the necessary wetland criteria and does not attempt to distinguish these "artificial" wetlands. If necessary, the user will need to independently determine if a wetland as identified by this manual fits in any of the categories of "artificial" wetlands specifically excluded in the definition.

(3) The following criteria, and technical approach comprise the basis for the identification and delineation of wetlands:

Wetlands meet the following criteria:

(a) Vegetation. The prevalent vegetation consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions described in subsection (1)(a) of this section. Hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. Indicators of vegetation associated with wetlands are listed in this section.

(b) Soil. A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part. (USDA-NRCS 1995, Federal Register, 7/13/94, Vol. 59, No. 133, pp 35680-83.) The following criteria reflect those soils that meet this definition:

(i) All Histosols except Folists; or

(ii) Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:

(A) Somewhat poorly drained with a water table equal to 0.0 foot (ft.) from the surface during the growing season; or

(B) Poorly drained or very poorly drained and have either:

(I) A water table equal to 0.0 ft. during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches(in.), or for other soils;

(II) A water table at less than or equal to 0.5 ft. from the surface during the growing season if permeability is equal to or greater than 6.0 in./hour in all layers within 20 in.; or

(III) The water table is at less than or equal to 1.0 ft. from the surface during the growing season if permeability is less than 6.0 in./hour in any layer within 20 in.; or

(iii) Soils that are frequently ponded for long or very long duration during the growing season; or

(iv) Soils that are frequently flooded for long duration or very long duration during the growing season.

Soil criteria indicators are listed in subsections (6), (7) and (8) of this section.

(c) Hydrology. Areas which are inundated and/or saturated to the surface for a consecutive number of days for more than 12.5 percent of the growing season are wetlands, provided the soil and vegetation parameters are met. Areas inundated or saturated to the surface for a consecutive number of days between 5 percent and 12.5 percent of the growing season in most years may or may not be wetlands. Areas inundated or saturated to the surface for less than 5 percent of the growing season are nonwetlands. Wetland hydrology exists if field indicators are present as described in subsection (10) of this section.

(d) Technical approach for the identification and delineation of wetlands. Except in certain situations defined in this manual, evidence of at least one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination.

Characteristics and Indicators of Hydrophytic Vegetation, Hydric Soils, and Wetland Hydrology

(4) Hydrophytic vegetation. The plant community concept is followed throughout the manual. Emphasis is placed on the assemblage of plant species that exert a controlling influence on the character of the plant community, rather than on indicator species. Thus, the presence of scattered individuals of an upland plant species in a community dominated by hydrophytic species is not a sufficient basis for concluding that the area is an upland community. Likewise, the presence of a few individuals of a hydrophytic species in a community dominated by upland species is not a sufficient basis for concluding that the area has hydrophytic vegetation.

(5) Indicators of hydrophytic vegetation. Several indicators may be used to determine whether hydrophytic vegetation is present on a site. However, the presence of a single individual of a hydrophytic species does not mean that hydrophytic vegetation is present. The strongest case for the presence of hydrophytic vegetation can be made when several indicators, such as those in the following list, are present. One of the most common errors made in delineating wetlands has been to assume that the first indicator (a) must be met in every case. This has led to some wetland areas being called nonwetland. Keep in mind that any of the following indicators may be used to meet the vegetation criteria. However, when using any indicator other than (a), it is important to have solid documentation of wetland hydrology and hydric soils. Indicators are listed in order of decreasing reliability. Although all are valid indicators, some are stronger than others. When a decision is based on an indicator appearing in the lower portion of the list, re-evaluate the parameter to ensure that the proper decision was reached.

(a) More than 50 percent of the dominant species are OBL, FACW+, FACW, FACW-, FAC+ or FAC (Table 1) on lists of plant species that occur in wetlands. A national interagency panel has prepared a National List of Plant Species that Occur in Wetlands (Reed 1988a). This list categorizes species according to their affinity for occurrence in wetlands. In addition, a 1993 supplement to the plants species list for Region 9 (Northwest) has been prepared (Reed 1993). Be sure to consult this supplement or any more recent supplements to confirm that a species has the proper indicator status. (The Seattle District of the Corps does not use the FAC neutral option as an indicator of hydrophytic vegetation but does allow the use of the FAC neutral option as an indicator of hydrology. See Hydrology indicator # 10 for definition.) FAC- species do not count as FAC species for the purposes of meeting indicator (a). Only FAC, FAC+, FACW (+, -) and OBL species count.

Table 1  
Plant Indicator Status Categories

<u>Indicator Category</u>	<u>Indicator Symbol</u>	<u>Definition</u>
OBLIGATE WETLAND PLANTS	OBL	Plants that almost always occur (estimated probability >99%) in wetlands under natural conditions, but which may also occur rarely (estimated probability <1%) in nonwetlands. Examples: <i>Typha latifolia</i> , <i>Lysichitum americanum</i>
FACULTATIVE WETLAND PLANTS	FACW	Plants that usually occur (estimated probability 67% to 99%) in wetlands, but also occur (estimated probability 1% to 33% in nonwetlands). Examples: <i>Fraxinus latifolia</i> <i>Cornus stolonifera</i> .

FACULTATIVE PLANTS	FAC	Plants with a similar likelihood (estimated probability 34% to 66%) of occurring in both wetlands and nonwetlands. Examples: <i>Alnus rubra</i> , <i>Rubus spectabilis</i>
FACULTATIVE UPLAND PLANTS	FACU	Plants that sometimes occur (estimated probability 1% to 33%) in wetlands, but occur more often (estimated probability 67% to 99%) in nonwetlands. Examples: <i>Acer macrophyllum</i> , <i>Rubus discolor</i>
OBLIGATE UPLAND PLANTS	UPL	Plants that rarely occur (estimated probability <1%) in wetlands, but occur almost always (estimated probability >99%) in nonwetlands under natural conditions.

Categories were originally developed and defined by the USFWS National Wetlands Inventory and subsequently modified by the National Plant List Panel. The three facultative categories are subdivided by (+) and (-) modifiers. FAC+ species are considered to have a greater estimated probability of occurring in wetlands than FAC species, while FAC- species are considered to have a lesser estimated probability of occurring in wetlands than FAC species.

(b) Other indicators. Although there are several other indicators of hydrophytic vegetation, it will seldom be necessary to use them. However, they may provide additional useful information to strengthen a case for the presence of hydrophytic vegetation. Additional training and/or experience may be required to employ these indicators.

(i) Visual observation of plant species growing in areas of prolonged inundation and/or soil saturation. This indicator can only be applied by experienced personnel who have accumulated information through several years of field experience and written documentation (field notes) that certain species commonly occur in areas of prolonged (>12.5 percent) inundation and/or soil saturation during the growing season. In certain situations, areas with wetland hydrology and hydric soils may be dominated by plant species classified as facultative upland. The most common examples in Washington are Western Hemlock forested wetlands and wet meadows planted with pasture grasses. It is important to keep in mind that facultative upland species are found in wetlands up to 33% of the time and, under certain circumstances, can be the dominant species in a wetland plant community. Usually, however, FACU species are found in uplands. Thus, if you encounter a situation where the hydrology and soil parameters are clearly met, do not eliminate the area from consideration as a wetland based on a lack of prevalence of facultative or wetter vegetation. Species such as *Gaultheria shallon*, *Acer circinatum*, and *Pteridium aquilinum* may be found in these areas, often on hummocks or downed logs or stumps. More typical wetland species may occur in such areas, though often as nondominants. Thus, occurrence of species commonly observed in other wetland areas provides a strong indication that hydrophytic vegetation is present. If you have strong evidence that the hydrology and soil parameters are met then the vegetation is acting as a hydrophyte and the area is probably a wetland. *CAUTION: It is necessary to have good documentation that the area experiences prolonged inundation and/or saturation in order to call it a wetland. The presence of standing water or saturated soil on a site at*

*a single point in time or for short periods is insufficient evidence that the species present are able to tolerate long periods of inundation. The user must relate the observed species to other similar situations and determine whether they are normally found in wet areas, taking into consideration the season and immediately preceding weather conditions. If you encounter this situation, you may be dealing with an atypical situation or a problem area.*

(ii) Morphological adaptations. Some hydrophytic species have easily recognized physical characteristics that indicate their ability to occur in wetlands. A given species may exhibit several of these characteristics, but not all hydrophytic species have evident morphological adaptations.

(iii) Technical literature. The technical literature may provide a strong indication that plant species comprising the prevalent vegetation are commonly found in areas where soils are periodically saturated for long periods. Sources of available literature include:

(A) Taxonomic references. Such references usually contain at least a general description of the habitat in which a species occurs. A habitat description such as, "Occurs in water of streams and lakes and in alluvial floodplains subject to periodic flooding," supports a conclusion that the species typically occurs in wetlands.

(B) Botanical journals. Some botanical journals contain studies that define species occurrence in various hydrologic regimes.

(C) Technical reports. Governmental agencies periodically publish reports (e.g., literature reviews) that contain information on plant species occurrence in relation to hydrologic regimes.

(D) Technical workshops, conferences, and symposia. Publications resulting from periodic scientific meetings contain valuable information that can be used to support a decision regarding the presence of hydrophytic vegetation. These usually address specific regions or wetland types.

(E) Wetland plant data base. The National Wetland Inventory has produced a Plant Data Base that contains habitat information on over 6,700 plant species that occur at

some estimated probability in wetlands, as compiled from the technical literature.

(iv) Physiological adaptations. Physiological adaptations include any features of the metabolic processes of plants that make them particularly fitted for life in saturated soil conditions. *NOTE: It is impossible to detect the presence of physiological adaptations in plant species during on-site visits.*

(v) Reproductive adaptations. Some plant species have reproductive features that enable them to become established and grow in saturated soil conditions.

(6) Hydric soils. Indicators. Indicators are listed in descending order of reliability. Although all are valid indicators, some are stronger indicators than others. When a decision is based on an indicator appearing in the lower portion of the list, re-evaluate the parameter to ensure that the proper decision was reached.

A hydric soil may be either drained or undrained, and a drained hydric soil may not continue to support hydrophytic vegetation. Therefore, not all areas having hydric soils will qualify as wetlands. Only when a hydric soil supports hydrophytic vegetation and the area has indicators of wetland hydrology may the area be referred to as a wetland.

A drained hydric soil is one in which sufficient ground or surface water has been removed by artificial means such that the area will no longer support hydrophytic vegetation or wetland hydrology. On-site evidence of drained soils includes:

(a) Presence of ditches or canals of sufficient depth to lower the water table below the major portion of the root zone of the prevalent vegetation.

(b) Presence of dikes, levees, or similar structures that obstruct normal inundation of an area.

(c) Presence of a tile system to promote subsurface drainage.

(d) Diversion of upland surface run-off from an area.

Although it is important to record such evidence of drainage of an area, a hydric soil that has been drained or partially drained still allows the soil parameter to be met. However, the area will not qualify as a wetland if the degree of drainage has been sufficient to preclude the presence of either hydrophytic vegetation or a hydrologic regime that occurs in wetlands. *NOTE: The mere presence of drainage structures in an area is not sufficient basis for concluding that a hydric soil has been drained; such areas may continue to have wetland hydrology.*

(7) Indicators of hydric soils (nonsandy soils). Several indicators are available for determining whether a given soil meets the definition and criteria for hydric soils. Any one of the following indicates that hydric soils are present.

(a) Organic soils (Histosols). As a general rule, a soil is an organic soil when:

(i) More than 50 percent (by volume) of the upper 32 inches of soil is composed of organic soil material; or

(ii) Organic soil material of any thickness rests on bedrock. Organic soils are saturated for long periods and are commonly called peats or mucks.

(b) Histic epipedons. A histic epipedon is an 8-inch to 16-inch layer at or near the surface of a mineral hydric soil that is saturated with water for 30 consecutive days or more

in most years and contains a minimum of 20 percent organic matter when no clay is present or a minimum of 30 percent organic matter when clay content is 60 percent or greater. Soils with histic epipedons are inundated or saturated for sufficient periods to greatly retard aerobic decomposition of the organic surface, and are considered to be hydric soils.

(c) Sulfidic material. When mineral soils emit an odor of rotten eggs, hydrogen sulfide is present. Such odors are only detected in soils that are permanently saturated and have sulfidic material within a few centimeters of the soil surface. Sulfides are produced only in a reducing environment.

(d) Aquic or peraquic moisture regime. An aquic moisture regime is a reducing one; i.e., it is virtually free of dissolved oxygen because the soil is saturated by ground water or by water of the capillary fringe. Because dissolved oxygen is removed from ground water by respiration of microorganisms, roots, and soil fauna, it is also implicit that the soil temperature is above biologic zero (41°F at 20 inches) at the same time the soil is saturated. Soils with peraquic moisture regimes are characterized by the presence of ground water which is always at or near the soil surface and exhibits reducing conditions. Examples include soils of tidal marshes and soils of closed, landlocked depressions that are fed by permanent streams.

(e) Reducing soil conditions. Soils saturated for long or very long duration will usually exhibit reducing conditions. Under such conditions, ions of iron are transformed (reduced) from a ferric valence state (Fe<sup>3+</sup>) to a ferrous valence state (Fe<sup>2+</sup>). This condition can often be detected in the field by a ferrous iron test. A simple colorimetric field test kit has been developed for this purpose. When a soil extract changes to a pink color upon addition of alpha-alpha-dipyridil, ferrous iron is present, which indicates a reducing soil environment. *NOTE: This test cannot be used in mineral hydric soils having low iron content, organic soils, and soils that have been desaturated for significant periods of the growing season. Caution: This test can only be used as a positive indicator of reducing conditions and it is only effective if it is done at the time that a mineral soil is actively reducing. While the presence of a reaction indicates anaerobic conditions, the lack of a reaction does not indicate a lack of anaerobic conditions.*

(f) Soil colors. The colors of various soil components are often the most diagnostic indicator of hydric soils. Colors of these components are strongly influenced by the frequency and duration of soil saturation, which leads to reducing soil conditions. Mineral hydric soils will be either gleyed or will have contrasting mottles and/or low chroma matrix. These are discussed below:

*NOTE: Soil terminology is undergoing constant change, and terms such as "mottles" and "low chroma colors" are being replaced with the term "redoximorphic features." In order to retain consistency with the Corps 1987 Manual, the older terms are used below.*

(i) Gleyed soils (gray colors). Gleyed soils develop when anaerobic soil conditions result in pronounced chemical reduction of iron, manganese, and other elements, thereby producing gray soil colors. Anaerobic conditions that occur in waterlogged soils result in the predominance of reduction processes, and such soils are greatly reduced. Iron is one of the most abundant elements in soils. Under

anaerobic conditions, iron is converted from the oxidized (ferric) state to the reduced (ferrous) state, which results in the bluish, greenish, or grayish colors associated with the gleying effect. Gleying immediately below the A-horizon or 10 inches (whichever is shallower) is an indication of a markedly reduced soil, and gleyed soils are hydric soils. Gleyed soil conditions can be determined by using the gley page of the Munsell Color Charts (Munsell Color 1990).

(ii) Soils with contrasting mottles and/or low chroma matrix. Mineral hydric soils that are saturated for substantial periods of the growing season (but not long enough to produce gleyed soils) will either have high chroma mottles and a low chroma matrix or will lack mottles but have a low matrix chroma. Mottled means "marked with spots of contrasting color." Soils that have high chroma mottles and a low chroma matrix are indicative of a fluctuating water table.

*NOTE: Hydric soils can also have low chroma mottles that contrast with the matrix color.*

The soil matrix is the portion (usually more than 50 percent) of a given soil layer that has the predominant color. Colors should be determined in soils that have been moistened; otherwise, state that colors are for dry soils. Mineral hydric soils usually have one of the following color features in the horizon immediately below the A-horizon or 10 inches (whichever is shallower):

(A) Matrix chroma of 2 or less in mottled soils.

(B) Matrix chroma of 1 or less in unmottled soils.

*NOTE: The matrix chroma of some dark (black) mineral hydric soils (e.g., Aquolls) will not conform to the criteria described in (f)(ii)(A) and (B) of this subsection; in such soils, gray mottles occurring at 10 inches or less are indicative of hydric conditions. Mollisols that are not hydric will often still have dark colored surface soils.*

*CAUTION: Soils with significant coloration due to the nature of the parent material may not exhibit the above characteristics. In such cases, this indicator cannot be used.*

(g) Soil appearing on hydric soils list. Using the criteria for hydric soils, the NTCHS has developed a list of hydric soils. Listed soils have reducing conditions for a significant portion of the growing season in a major portion of the root zone and are frequently saturated within 12 inches of the soil surface if they have not been effectively drained. *CAUTION: Do not use this indicator unless you have field verified that the profile description of the mapping unit conforms to that of the sampled soil.*

(h) Iron and manganese concretions. During the oxidation-reduction process, iron and manganese in suspension are sometimes segregated as oxides into concretions, nodules or soft masses. These accumulations are usually black or dark brown. Concretions >2 mm. in diameter occurring within 7.5 cm. of the surface are evidence that the soil is saturated for long periods near the surface.

*CAUTION: Concretions may be relict features. Be careful to confirm that the hydrologic conditions that created the concretions still exist before using this indicator.*

(8) Additional indicators of hydric soils (for sandy soils). Not all indicators listed above can be applied to sandy soils. In particular, soil color may not be a reliable indicator in most sandy soils. However, three additional soil

features may be used as indicators of sandy hydric soils, including:

(a) High organic matter content in the surface horizon. Organic matter tends to accumulate above or in the surface horizon of sandy soils that are inundated or saturated to the surface for a significant portion of the growing season. Prolonged inundation or saturation creates anaerobic conditions that greatly inhibit decomposition (oxidation) of organic matter.

(b) Streaking of subsurface horizons by organic matter. Organic matter is moved downward through sand as the water table fluctuates. This often occurs more rapidly and to a greater degree in some vertical sections of a sandy soil containing a higher content of organic matter than in others. Thus, the sandy soil appears streaked with darker areas. When soil from a darker area is rubbed between the fingers, the organic matter stains the fingers.

(c) Organic pans. As organic matter is moved downward through sandy soils, it tends to accumulate at the point representing the most commonly occurring depth to the water table. This organic matter tends to become slightly cemented with iron and aluminum, forming a thin layer of hardened soil (spodic horizon). These horizons often occur at depths of 12 to 30 inches below the mineral surface. Wet spodic soils usually have thick dark surface horizons that are high in organic matter with dull, gray horizons above the spodic horizon. Generally, the nearer to the surface the spodic horizon, the more likely the soil is hydric.

*CAUTION: In recently deposited sandy material (e.g., accreting sandbars), it may be impossible to find any of these indicators. In such cases, consider this a problem area (Entisols).*

*NOTE: The NRCS developed and published Field Indicators of Hydric Soils in the United States in July 1996. This document includes many useful indicators of hydric soils, however, some hydric soils will lack one of the indicators included in the NRCS document. Therefore, the indicators are only used as positive indicators — if one or more of the indicators is present, the soil is a hydric soil, but the lack of any of these indicators does not mean the soil is nonhydric. In addition, the Corps has not authorized the use of these new field indicators and has stated that while they may be used as additional information, they do not replace the indicators in the 1987 Manual nor may they be used to contradict the 1987 Manual indicators.*

(9) Wetland hydrology. The term "wetland hydrology" encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and chemically reducing conditions, respectively. Such characteristics are usually present in areas that are inundated or have soils that are saturated to the surface for sufficient duration to develop hydric soils and support vegetation typically adapted for life in periodically anaerobic soil conditions. Hydrology is often the least exact of the parameters, and indicators of wetland hydrology are sometimes difficult to find in the field. However, it is essential to establish that a wetland area is



periodically inundated or has saturated soils during the growing season.

It is usually impractical to accurately measure the duration of soil saturation in the field because it takes repeated visits over a lengthy (several years) period of time. However, there has been a sufficient amount of research to support that the field indicators provided in the manual and supplementary guidance can be good measures of both the frequency and duration of soil saturation.

Given the requirement that inundation/saturation must be present for a certain portion of the growing season it is important to understand how the concept of growing season should be applied. The definition of growing season is: "The portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biological zero (41 degrees F). For ease of determination this period can be approximated by the number of frost-free days." The Washington State Wetland Identification and Delineation Manual contains additional guidance on how to determine the growing season.

(10) Indicators of wetland hydrology. Indicators of wetland hydrology may include, but are not necessarily limited to: Drainage patterns, drift lines, sediment deposition, watermarks, stream gage data and flood predictions, historic records, visual observation of saturated soils, and visual observation of inundation. Any of these indicators may be evidence of wetland hydrologic characteristics.

Methods for determining hydrologic indicators can be categorized according to the type of indicator. Recorded data include stream gage data, lake gage data, tidal gage data, flood predictions, and historical records. Use of these data is commonly limited to areas adjacent to streams or other similar areas. Recorded data usually provide both short-term and long-term information about frequency and duration of inundation, but contain little or no information about soil saturation, which must be gained from soil surveys or other similar sources. The remaining indicators require field observations. Field indicators are evidence of present or past hydrologic events (e.g., location and height of flooding). Indicators are listed in order of decreasing reliability. Although all are valid indicators, some are stronger indicators than others. When a decision is based on an indicator appearing in the lower portion of the list, re-evaluate the parameter to ensure that the proper decision was reached. Indicators for recorded data and field observations include:

(a) Recorded data. Stream gage data, lake gage data, tidal gage data, flood predictions, and historical data may be available from the following sources:

(i) Corps of Engineers (CE) district offices. Most CE Districts maintain stream, lake, and tidal gage records for major water bodies in their area. In addition, CE planning and design documents often contain valuable hydrologic information. For example, a General Design Memorandum (GDM) usually describes flooding frequencies and durations for a project area. Furthermore, the extent of flooding within a project area is sometimes indicated in the GDM according to elevation (height) of certain flood frequencies (1-, 2-, 5-, 10-year, etc.).

(ii) U.S. Geological Survey (USGS). Stream and tidal gage data are available from the USGS offices throughout

the Nation, and the latter are also available from the National Oceanic and Atmospheric Administration. CE Districts often have such records.

(iii) State, county, and local agencies. These agencies often have responsibility for flood control/relief and flood insurance.

(iv) Natural Resource Conservation Service Small Watershed Projects. Planning documents from this agency are often helpful, and can be obtained from the NRCS district office in the county.

(v) Planning documents of developers.

(b) Field data. The following field hydrologic indicators can be assessed quickly, and although some of them are not necessarily indicative of hydrologic events that occur only during the growing season, they do provide evidence that inundation and/or soil saturation has occurred:

*CAUTION: Many delineators have made the mistake of assuming that the wettest conditions occur in the earliest part of the growing season - usually March and April. However, in some situations, the wettest time of the growing season may be later. This is especially true in areas that receive snowmelt run-off or irrigation water or are subject to tidal influence.*

(i) Visual observation of inundation. The most obvious and revealing hydrologic indicator may be simply observing the areal extent of inundation. However, because seasonal conditions and recent weather conditions can contribute to surface water being present on a nonwetland site, both should be considered when applying this indicator.

(ii) Visual observation of soil saturation. Examination of this indicator requires digging a soil pit to a depth of 16 inches and observing the level at which water stands in the hole after sufficient time has been allowed for water to drain into the hole. The required time will vary depending on soil texture. In some cases, the upper level at which water is flowing into the pit can be observed by examining the wall of the hole. This level usually represents the depth to the water table. The depth to saturated soils will always be nearer the surface due to the capillary fringe. For soil saturation to impact vegetation, it must occur within a major portion of the root zone (usually within 12 inches of the surface) of the prevalent vegetation. The major portion of the root zone is that portion of the soil profile in which more than one half of the plant roots occur. *CAUTION: In some heavy clay soils, water may not rapidly accumulate in the hole even when the soil is saturated. If water is observed at the bottom of the hole but has not filled to the 12-inch depth, examine the sides of the hole and determine the shallowest depth at which water is entering the hole. When applying this indicator, the season of the year and preceding weather conditions as well the duration of saturation must be considered. NOTE: This indicator has caused confusion in relation to the hydrology criteria, which stipulates that saturation must be to the surface. If the water table (the level at which standing water is found in an unlined hole) is found within twelve inches of the soil surface in a nonsandy soil, one can assume that soil saturation occurs to the surface. For sandy soils, the water table must be within six inches of the soil surface. However, simply finding the water table at the appropriate depth on one particular day, does not necessarily confirm that saturation to the surface for the appropriate length of time does occur. Conversely,*

*finding the water table below the appropriate depth on one particular day, does not confirm that saturation to the surface for the appropriate length of time does not occur.*

(iii) Watermarks. Watermarks are most common on woody vegetation. They occur as stains on bark or other fixed objects (e.g., bridge pillars, buildings, tree trunks, fences, etc.). When several watermarks are present, the highest reflects the maximum extent of recent inundation.

(iv) Drift lines. This indicator is most likely to be found adjacent to streams or other sources of water flow in wetlands, but also often occurs in tidal marshes. Evidence consists of deposition of debris in a line on the surface or debris entangled in above ground vegetation or other fixed objects. Debris usually consists of remnants of vegetation (branches, stems, and leaves), sediment, litter, and other waterborne materials deposited parallel to the direction of water flow. Drift lines provide an indication of the minimum portion of the area inundated during a flooding event; the maximum level of inundation is generally at a higher elevation than that indicated by a drift line.

(v) Sediment deposits. Plants and other vertical objects often have thin layers, coatings, or depositions of mineral or organic matter on them after inundation. This evidence may remain for a considerable period before it is removed by precipitation or subsequent inundation. Sediment deposition on vegetation and other objects provides an indication of the minimum inundation level. When sediments are primarily organic (e.g., fine organic material, algae), the detritus may become encrusted on or slightly above the soil surface after dewatering occurs.

(vi) Drainage patterns within wetlands. This indicator, which occurs primarily in wetlands adjacent to streams or in depressions with closed or restricted outlets and impervious subsoils, consists of surface evidence of drainage flow into or through an area that is restricted for a substantial duration. In some wetlands, this evidence may exist as a drainage pattern eroded into the soil, vegetative matter (debris) piled against thick vegetation or woody stems oriented perpendicular to the direction of water flow, or the absence of expected leaf litter. Scouring is often evident around roots of persistent vegetation. Debris may be deposited in or along the drainage pattern. *CAUTION: Drainage patterns also occur in upland areas after periods of considerable precipitation; therefore, topographic position must also be considered when applying this indicator.*

(vii) Oxidized rhizospheres surrounding living roots are acceptable hydrology indicators on a case-by-case basis and may be useful in ground water driven systems. Rhizospheres should also be reasonably abundant and within the upper 12 inches of the soil profile. Oxidized rhizospheres should be supported by other indicators of hydrology if hydrology evidence is weak. *Caution: Make sure that the oxidation is occurring along live roots/rhizomes and thus, that they are not relict.*

(viii) Local soil survey data - If you can field verify that the soil at your sampling site is a soil listed in the county soil survey or on the Washington State List of Hydric Soils, then the data in the soil survey referring to the flooding and/or high water table conditions for that soil can be accepted as valid for your site (assuming the site has not

been effectively drained since the time it was mapped by the NRCS).

(ix) Water-stained leaves - Forested wetlands that are inundated at some time of the year will frequently have water stained leaves on the forest floor. These leaves are generally grayish or blackish in appearance, as a result of being underwater for significant periods. This indicator should be used with caution as water-stained leaves don't always indicate long-term inundation/saturation. It is important to compare the color of the leaves in the area presumed to be wetland with leaves of the same species in an adjacent area that is clearly upland. There should be a distinct difference in the color and texture of the leaves.

(x) FAC neutral test - In areas where hydrology evidence is weak or lacking, the FAC neutral test may be employed to corroborate the presence of sufficient hydrology. Apply as follows: Compare the number of dominants that are FACW and OBL with the number of dominants that are FACU and UPL (ignore the "neutral" FAC dominants). If there are more dominants that are FACW or wetter than there are dominants that are FACU or drier, then one can infer that the plant community is reflecting the presence of wetland hydrology. If there is a tie, compare the number of FAC+ and FAC- to see if there is a difference. If there is still a tie between the numbers of dominants, examine the nondominant species to determine if they provide an indication of how strongly hydrophytic the vegetation is. Any use of nondominants should be clearly documented and explained.

(xi) Other - Explain and provide rationale for use.

(11) Atypical situations. When a determination is made that positive indicators of hydrophytic vegetation, hydric soils, and/or wetland hydrology could not be found due to effects of recent human activities or natural events, it is necessary to employ different methods of determining the presence of indicators for hydrology, soils or vegetation. The term recent refers to the period of time since legal jurisdiction of an applicable law or regulation took effect.

When any of the three types of situations described below occurs, application of normal methods will lead to the conclusion that the area is not a wetland because positive wetland indicators for at least one of the three parameters will be absent. Therefore, apply procedures described in Part IV, Section F of the 1987 Corps of Engineers Wetland Delineation Manual or the Washington State Wetland Identification and Delineation Manual (as appropriate) to determine whether positive indicators of hydrophytic vegetation, hydric soils, and/or wetland hydrology existed prior to alteration of the area.

This section is applicable to delineations made in the following types of situations:

(a) Unauthorized activities. Unauthorized discharges requiring enforcement actions may result in removal or covering of indicators of one or more wetland parameters. Examples include, but are not limited to:

(i) Alteration or removal of vegetation;  
(ii) Placement of dredged or fill material over hydric soils; and/or

(iii) Construction of levees, drainage systems, or dams that significantly alter the area hydrology. *NOTE: This section should not be used for activities that have been*

*previously authorized or those that are exempted from regulation.*

(b) Natural events. Naturally occurring events may result in either creation or alteration of wetlands. For example, recent beaver dams may impound water, thereby resulting in a shift of hydrology and vegetation to wetlands. However, hydric soil indicators may not have developed due to insufficient time having passed to allow their development. Fire, avalanches, volcanic activity, and changing river courses are other examples. *NOTE: It is necessary to determine whether alterations to an area have resulted in changes that are now the "normal circumstances."* The relative permanence of the change and whether the area is now functioning as a wetland must be considered.

(c) Human-induced wetlands. These are wetlands that have been purposely or incidentally created by human activities, but in which wetland indicators of one or more parameters are absent. For example, road construction may have resulted in impoundment of water in an area that previously was nonwetland, thereby affecting hydrophytic vegetation and wetland hydrology in the area. However, the area may lack hydric soil indicators. *NOTE: This is not intended to bring into jurisdiction those human-made wetlands that are exempted under agency regulations or policy.* It is also important to consider whether the man-induced changes are now the "normal circumstances" for the area. Both the relative permanence of the change and the functioning of the area as a wetland are implied.

(12) Problem areas. There are certain wetland types and/or conditions that may make application of indicators of one or more parameters difficult, at least at certain times of the year. These are not considered to be atypical situations. Instead, they are wetland types in which wetland indicators of one or more parameters may be periodically lacking due to normal environmental conditions or seasonal or annual variations in environmental conditions that result from causes other than human activities or catastrophic natural events. When one of these wetland types is encountered, the methods described in Part IV, Section G of the 1987 Manual or the state manual should be used.

(13) Types of problem areas. Representative examples of potential problem areas, types of variations that occur, and their effects on wetland indicators are presented in the following subparagraphs. Similar situations may sometimes occur in other wetland types. *Note: This section is not intended to bring nonwetland areas having wetland indicators of two, but not all three, parameters into jurisdiction. This list is not intended to be limiting.*

(a) Wetlands on slopes (seeps) and other glacial features. Slope wetlands can occur in certain glaciated areas in which thin soils cover relatively impermeable unsorted glacial material or till or in which layers of sorted glacial material have different hydraulic conditions that produce a broad zone of ground water seepage. Such areas are seldom, if ever, flooded, but downslope ground water movement keeps the soils saturated for a sufficient portion of the growing season to produce anaerobic and reducing soil conditions. This fosters development of hydric soil characteristics and selects for hydrophytic vegetation. Indicators of wetland hydrology may be lacking during the drier portion of the growing season.

(b) Seasonal wetlands. In Washington, some depression areas have wetland indicators of all three parameters during the wetter portion of the growing season, but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. For example, obligate and facultative wetland plant species normally are dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. Also, these areas may be inundated during the wetter portion of the growing season, but wetland hydrology indicators may be totally lacking during the drier portion of the growing season. It is important to establish that an area truly is a water body. Water in a depression normally must be sufficiently persistent to exhibit an ordinary high-water mark or the presence of wetland characteristics before it can be considered as wetland potentially subject to jurisdiction. The determination that an area exhibits wetland characteristics for a sufficient portion of the growing season to qualify as a wetland must be made on a case-by-case basis. Such determinations should consider the respective length of time that the area exhibits upland and wetland characteristics, and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soil, drainage characteristics, uses to which it has been subjected, and weather or hydrologic records. This situation is common in eastern Washington and parts of western Washington where precipitation is highly seasonal and/or prolonged droughts occur frequently. It is important to become familiar with the types of wetlands found in these areas. In some cases, it may be necessary to withhold making a final wetland determination until a site is examined during the wettest part of the growing season. Consultation with other experienced delineators may be helpful as well.

(c) Vernal wetlands - Although these systems are usually associated with California, Washington does have vernal wetlands, particularly in the region around Spokane. These wetlands are a distinct type of seasonal wetland described above. The hydrology in these wetlands is driven by winter and early spring rain and snowmelt and may be totally lacking by early summer. A wetland plant community grows and reproduces in spring in response to the wet conditions and is replaced by an upland plant community by summer. Attempts to delineate these wetlands in summer or fall may result in a false negative conclusion. In addition, during periods of extended drought, these wetlands may remain dry for several years.

(d) Vegetated flats. In both coastal and interior areas of Washington, vegetated flats are often dominated by annual species that are categorized as OBL. Application of normal sampling procedures during the growing season will clearly result in a positive wetland determination. However, these areas will appear to be unvegetated mudflats when examined during the nongrowing season, and the area would not qualify at that time as a wetland due to an apparent lack of vegetation.

(e) Mollisols (prairie and steppe soils) - Mollisols are dark colored, base-rich soils. They are common in grassland areas of the state, especially in eastern Washington and the prairies of the south Puget Sound basin. These soils typically have deep, dark topsoil layers (mollic epipedons)

and low chroma matrix colors to considerable depths. They are rich in organic matter due largely to the vegetation (deep roots) and reworking of the soil and organic matter by earthworms, ants, moles, and rodents. The low chroma colors of mollisols are not necessarily due to prolonged saturation, so be particularly careful in making wetland determinations in these soils. Become familiar with the characteristics of mollisols with aquic moisture regimes, and be able to recognize these from nonhydryc mollisols.

(f) Entisols (floodplain and sandy soils) - Entisols are usually young or recently formed soils that have little or no evidence of pedogenically developed horizons. These soils are typical of floodplains throughout Washington, but are also found in glacial outwash plains, along tidal waters, and in other areas. They include sandy soils of riverine islands, bars, and banks and finer-textured soils of floodplain terraces. Wet entisols have an aquic or peraquic moisture regime and are considered wetland soils. Some entisols are easily recognized as hydric soils such as the sulfaquents of tidal salt marshes, whereas others pose problems because they do not possess typical hydric soil field indicators. Wet sandy entisols (with loamy fine sand and coarser textures in horizons within 20 inches of the surface) may lack sufficient organic matter and clay to develop hydric soil colors. When these soils have a hue between 10YR and 10Y and distinct or prominent mottles present, a chroma of 3 or less is permitted to identify the soil as hydric (i.e., an aquic moisture regime). Also, hydrologic data showing that NTCHS criteria # 3 or # 4 are met are sufficient to verify these soils as hydric.

(g) Red parent material and volcanic ash soils - Hydric mineral soil derived from red parent materials (e.g., weathered clays, Triassic sandstones, and Triassic shales) may lack the low chroma colors characteristic of most hydric mineral soils. In these soils, the hue is redder than 10YR because of parent materials that remain red after citrate-dithionite extraction, so the low chroma requirement for hydric soil is waived. Additionally, some hydric soils in Washington that are influenced by volcanic ash or other volcanic material may not exhibit hydric soil indicators.

(h) Spodosols (evergreen forest soils) - These soils are usually associated with coniferous forests. Spodosols have a gray eluvial E-horizon overlying a diagnostic spodic horizon of accumulated (sometimes weakly cemented) organic matter and aluminum. A process called podzolization is responsible for creating these two soil layers. Organic acids from the leaf litter on the soil surface are moved downward through the soil with rainfall, cleaning the sand grains in the first horizon then coating the sand grains with organic matter and iron oxides in the second layer. Certain vegetation produces organic acids that speed podzolization including western hemlock (*Tsuga heterophylla*), spruces (*Picea* spp.), pine (*Pinus* spp.), larches (*Larix* spp.), and oaks (*Quercus* spp.) (Buol, *et al*, 1980). To the untrained observer, the gray leached layer may be mistaken as a field indicator of hydric soil, but if one looks below the spodic horizon the brighter matrix colors often distinguish nonhydryc spodosols from hydric ones. The wet spodosols (formerly called "ground water podzolic soils") usually have thick dark surface horizons, dull gray E-horizons, and low chroma subsoils.

(i) Interdunal swale wetlands - Along the Washington coastline, seasonally wet swales supporting hydrophytic vegetation are located within sand dune complexes on barrier islands and beaches. Some of these swales are inundated or saturated to the surface for considerable periods during the growing season, while others are wet for only the early part of the season. In some cases, swales may be flooded irregularly by the tides. These wetlands have sandy soils that generally lack field indicators of hydric soil. In addition, indicators of wetland hydrology may be absent during the drier part of the growing season. Consequently, these wetlands may be difficult to identify.

(j) Vegetated river bars and adjacent flats - Along streams, particularly in arid and semiarid parts of the state, some river bars and flats may be vegetated by FACU species while others may be colonized by wetter species. If these areas are frequently inundated for  $\geq 12.5\%$  of the growing season, they are wetlands. The soils often do not reflect the characteristic field indicators of hydric soils, however, and thereby pose delineation problems.

[Statutory Authority: RCW 90.58.140(3) and [90.58].200. 97-04-076 (Order 96-12), § 173-22-080, filed 2/5/97, effective 3/8/97.]

### Chapter 173-32 WAC

#### ALLOCATION OF FINANCIAL AID TO COUNTIES AND CITIES TO ASSIST IN COMPREHENSIVE PLANNING FOR SOLID WASTE MANAGEMENT

##### WAC

173-32-010 through 173-32-040 Repealed.

##### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

173-32-010	Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-32-010, filed 9/4/90, effective 10/5/90; Order DE 71-2, § 173-32-010, filed 4/30/71.] Repealed by 97-18-047 (Order 97-17), filed 8/28/97, effective 9/28/97.
173-32-020	Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-32-020, filed 9/4/90, effective 10/5/90; Order DE 71-2, § 173-32-020, filed 4/30/71.] Repealed by 97-18-047 (Order 97-17), filed 8/28/97, effective 9/28/97.
173-32-030	Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-32-030, filed 9/4/90, effective 10/5/90; Order DE 71-2, § 173-32-030, filed 4/30/71.] Repealed by 97-18-047 (Order 97-17), filed 8/28/97, effective 9/28/97.
173-32-040	Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-32-040, filed 9/4/90, effective 10/5/90; Order DE 71-2, § 173-32-040, filed 4/30/71.] Repealed by 97-18-047 (Order 97-17), filed 8/28/97, effective 9/28/97.

**WAC 173-32-010 through 173-32-040 Repealed.**  
See Disposition Table at beginning of this chapter.

**Chapter 173-90 WAC**  
**STANDARDS AND LIMITATIONS ON THE USE OF**  
**CLEAN WATER FUNDS FOR POLLUTION**  
**ABATEMENT**

**WAC**

173-90-010 through 173-90-070 Repealed.

**DISPOSITION OF SECTIONS FORMERLY**  
**CODIFIED IN THIS CHAPTER**

173-90-010	Purpose and scope. [Statutory Authority: 1986 c 3 § 4. 86-19-042 (Order DE 86-25), § 173-90-010, filed 9/12/86.] Repealed by 97-17-082 (Order 97-16), filed 8/19/97, effective 9/19/97.
173-90-015	Definitions. [Statutory Authority: 1986 c 3 § 4. 86-19-042 (Order DE 86-25), § 173-90-015, filed 9/12/86.] Repealed by 97-17-082 (Order 97-16), filed 8/19/97, effective 9/19/97.
173-90-020	Provision of guidelines. [Statutory Authority: 1986 c 3 § 4. 86-19-042 (Order DE 86-25), § 173-90-020, filed 9/12/86.] Repealed by 97-17-082 (Order 97-16), filed 8/19/97, effective 9/19/97.
173-90-040	Ground water management area planning grants—Eligibility criteria, funding levels, development of priority rating and priority lists—Eligibility criteria. [Statutory Authority: 1986 c 3 § 4. 86-19-042 (Order DE 86-25), § 173-90-040, filed 9/12/86.] Repealed by 97-17-082 (Order 97-16), filed 8/19/97, effective 9/19/97.
173-90-050	Nonpoint source pollution control activity grants—Eligible criteria, funding levels and administration, and establishing highest priority. [Statutory Authority: 1986 c 3 § 4. 86-19-042 (Order DE 86-25), § 173-90-050, filed 9/12/86.] Repealed by 97-17-082 (Order 97-16), filed 8/19/97, effective 9/19/97.
173-90-060	Aquifer protection assistance grants—Eligibility criteria, funding levels, and establishing highest priority. [Statutory Authority: 1986 c 3 § 4. 86-19-042 (Order DE 86-25), § 173-90-060, filed 9/12/86.] Repealed by 97-17-082 (Order 97-16), filed 8/19/97, effective 9/19/97.
173-90-070	Water pollution control design grants—Eligibility criteria, funding levels, and establishing highest priority. [Statutory Authority: 1986 c 3 § 4. 86-19-042 (Order DE 86-25), § 173-90-070, filed 9/12/86.] Repealed by 97-17-082 (Order 97-16), filed 8/19/97, effective 9/19/97.

**WAC 173-90-010 through 173-90-070 Repealed.**  
 See Disposition Table at beginning of this chapter.

**Chapter 173-95A WAC**  
**USES AND LIMITATIONS OF CENTENNIAL**  
**CLEAN WATER FUNDS**

**WAC**

173-95A-010	Purpose and scope.
173-95A-020	Definitions.
173-95A-030	Determining a public health need.
173-95A-040	Determining a substantial environmental degradation.
173-95A-050	Awarding grant and loan funds.

**WAC 173-95A-010 Purpose and scope.** This chapter is intended to address critical or emergent public health needs or environmental problems in jurisdictions that are not in compliance with the Growth Management Act. It implements an exception to the prohibition of counties, cities, and towns that are not in compliance with the Growth Management Act (chapter 36.70A RCW) from receiving grant or loan funds for water pollution control facilities. The exception is provided in limited circumstances, where

necessary to address a public health need or substantial environmental degradation.

[Statutory Authority: RCW 70.146.070 and 36.70A.040. 97-24-096 (Order 97-31), § 173-95A-010, filed 12/3/97, effective 1/3/98.]

**WAC 173-95A-020 Definitions.** (1) "Compliance with the Growth Management Act" means that:

(a) A county, city, or town that is required or chooses to plan under RCW 36.70A.040 has adopted a comprehensive plan and development regulations in conformance with the requirements of chapter 36.70A RCW, after it is required that the comprehensive plan and development regulations be adopted; and

(b) The county, city, or town has not been found out of compliance by a growth management hearings board; or

(c) A growth management hearings board has found a county, city, or town in compliance with the requirements of chapter 36.70A RCW, after previously finding the county, city, or town was not in compliance.

(2) "Department" means the department of ecology.

(3) "Public health need" means that a situation exists where:

(a) There is a documented potential for:

(i) Contaminating a source of drinking water; or

(ii) Failure of existing wastewater system or systems resulting in contamination being present on the surface of the ground in such quantities and locations as to create a potential for public contact; or

(iii) Contamination of a commercial or recreational shellfish bed as to create a critical public health risk associated with consumption of the shellfish; or

(iv) Contamination of surface water so as to create a critical public health risk associated with recreational use; and

(b) The problem generally involves a serviceable area including, but not limited to, a subdivision, town, city, or county, or an area serviced by on-site sewage disposal systems; and

(c) The problem cannot be corrected through more efficient operation and maintenance of an existing wastewater disposal system or systems.

(4) "Substantial environmental degradation" means that:

(a) There is a situation causing real, documented, critical environmental contamination that:

(i) Contributes to violations of the state's water quality standards; or

(ii) Interferes with beneficial uses of the waters of the state; and

(b) The problem generally involves a serviceable area including, but not limited to, a subdivision, town, city, or county, or an area serviced by on-site sewage disposal systems; and

(c) The problem cannot be corrected through more efficient operation and maintenance of an existing wastewater disposal system or systems.

(5) "Water pollution control facility" or "facilities" means any facilities or systems for the control, collection, storage, treatment, disposal, or recycling of wastewater, including but not limited to sanitary sewage, storm water, residential, commercial, industrial, and agricultural wastes, which are causing water quality degradation due to concen-

trations of conventional, nonconventional, or toxic pollutants. Water pollution control facilities include all equipment, utilities, structures, real property, and interests in and improvements on real property necessary for or incidental to such purpose. Water pollution control facilities also include such facilities, equipment, and collection systems as are necessary to protect federally designated sole source aquifers.

[Statutory Authority: RCW 70.146.070 and 36.70A.040. 97-24-096 (Order 97-31), § 173-95A-020, filed 12/3/97, effective 1/3/98.]

**WAC 173-95A-030 Determining a public health need.** For the purposes of this chapter, a determination of a public health need related to a grant or loan must be requested by the public official who signed the grant or loan application. The request needs to be in the form of a letter, with supporting documentation, to the secretary of the Washington state department of health. The secretary or his or her designee reviews the documentation and determines whether a public health need exists. A determination of a public health need must be documented in a letter signed by the secretary or his or her designee and addressed to the same public official.

[Statutory Authority: RCW 70.146.070 and 36.70A.040. 97-24-096 (Order 97-31), § 173-95A-030, filed 12/3/97, effective 1/3/98.]

**WAC 173-95A-040 Determining a substantial environmental degradation.** For the purposes of this chapter, a determination of a substantial environmental degradation related to a grant or loan must be requested by the public official who signed the grant or loan application. The request needs to be in the form of a letter, with supporting documentation, to the director of the department. The director or his or her designee reviews the documentation and determines whether a substantial environmental degradation exists. A determination of a substantial environmental degradation must be documented in a letter signed by the director or his or her designee and addressed to the same public official.

[Statutory Authority: RCW 70.146.070 and 36.70A.040. 97-24-096 (Order 97-31), § 173-95A-040, filed 12/3/97, effective 1/3/98.]

**WAC 173-95A-050 Awarding grant and loan funds.** A county, city or town that has been offered a grant or loan for a water pollution control facility project may not receive grant or loan funds while the county, city, or town is not in compliance with the Growth Management Act unless:

(1) A letter of determination showing that a public health need exists has been provided by the Washington state department of health; or a letter of determination showing that a substantial environmental degradation exists has been provided by the department; and

(2) The county, city or town has provided documentation to the department that actions or measures are being implemented to address the public health need or substantial environmental degradation; and

(3) The department has determined that the project is designed to address only the public health need or substantial environmental degradation described in the documentation, and does not address unrelated needs including but not limited to provisions for additional growth.

[Statutory Authority: RCW 70.146.070 and 36.70A.040. 97-24-096 (Order 97-31), § 173-95A-050, filed 12/3/97, effective 1/3/98.]

## Chapter 173-201A WAC

### WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE STATE OF WASHINGTON

#### WAC

173-201A-020	Definitions.
173-201A-030	General water use and criteria classes.
173-201A-040	Toxic substances.
173-201A-050	Radioactive substances.
173-201A-060	General considerations.
173-201A-110	Short-term modifications.
173-201A-130	Specific classifications—Freshwater.
173-201A-140	Specific classifications—Marine water.
173-201A-160	Implementation.

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

"Action value" means a total phosphorus (TP) value established at the upper limit of the trophic states in each ecoregion. 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.

"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. "The Stormwater Management Manual for the Puget Sound Basin" (1992), may be used as a guideline, to the extent appropriate, for developing best management practices to apply AKART for storm water discharges.

"Background conditions" 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. When assessing background conditions in the headwaters of a disturbed watershed it may be necessary to use the background conditions of a neighboring or similar watershed as the reference conditions.

"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 increased 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.

"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 characteristic 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.

"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 EPA's *Ecoregions of the Pacific Northwest* Document No. 600/3-86/033 July 1986 by Omernik and Gallant.

"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<sub>3</sub>).

"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-100.

"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.

"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 RCW 90.48.160 et seq. or RCW 90.48.260 or both, 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 (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 waterbody.

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

"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. (Waterbodies 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.

[Statutory Authority: Chapter 90.48 RCW and 40 CFR 131. 97-23-064 (Order 94-19), § 173-201A-020, filed 11/18/97, effective 12/19/97. Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-020, filed 11/25/92, effective 12/26/92.]

**WAC 173-201A-030 General water use and criteria classes.** The following criteria shall apply to the various classes of surface waters in the state of Washington:

(1) **Class AA (extraordinary).**

(a) General characteristic. Water quality of this class shall markedly and uniformly exceed the requirements for all or substantially all uses.

(b) Characteristic uses. Characteristic uses shall include, but not be limited to, the following:

(i) Water supply (domestic, industrial, agricultural).

(ii) Stock watering.

(iii) Fish and shellfish:

Salmonid migration, rearing, spawning, and harvesting.

Other fish migration, rearing, spawning, and harvesting.

Clam, oyster, and mussel rearing, spawning, and harvesting.

Crustaceans and other shellfish (crabs, shrimp, crayfish, scallops, etc.) rearing, spawning, and harvesting.

(iv) Wildlife habitat.



(v) Recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment).

(vi) Commerce and navigation.

(c) Water quality criteria:

(i) Fecal coliform organisms:

(A) Freshwater - fecal coliform organism levels shall both not exceed a geometric mean value of 50 colonies/100 mL and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 100 colonies/100 mL.

(B) Marine water - fecal coliform organism levels shall both not exceed a geometric mean value of 14 colonies/100 mL, and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 43 colonies/100 mL.

(ii) Dissolved oxygen:

(A) Freshwater - dissolved oxygen shall exceed 9.5 mg/L.

(B) Marine water - dissolved oxygen shall exceed 7.0 mg/L. When natural conditions, such as upwelling, occur, causing the dissolved oxygen to be depressed near or below 7.0 mg/L, natural dissolved oxygen levels may be degraded by up to 0.2 mg/L by human-caused activities.

(iii) Total dissolved gas shall not exceed 110 percent of saturation at any point of sample collection.

(iv) Temperature shall not exceed 16.0°C (freshwater) or 13.0°C (marine water) due to human activities. When natural conditions exceed 16.0°C (freshwater) and 13.0°C (marine water), no temperature increases will be allowed which will raise the receiving water temperature by greater than 0.3°C.

Incremental temperature increases resulting from point source activities shall not, at any time, exceed  $t=23/(T+5)$  (freshwater) or  $t=8/(T-4)$  (marine water). Incremental temperature increases resulting from nonpoint source activities shall not exceed 2.8°C.

For purposes hereof, "t" represents the maximum permissible temperature increase measured at a mixing zone boundary; and "T" represents the background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity of the discharge.

(v) pH shall be within the range of 6.5 to 8.5 (freshwater) or 7.0 to 8.5 (marine water) with a human-caused variation within the above range of less than 0.2 units.

(vi) Turbidity shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

(vii) Toxic, radioactive, or deleterious material concentrations shall be below those which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department (see WAC 173-201A-040 and 173-201A-050).

(viii) Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.

(2) **Class A (excellent).**

(a) General characteristic. Water quality of this class shall meet or exceed the requirements for all or substantially all uses.

(b) Characteristic uses. Characteristic uses shall include, but not be limited to, the following:

(i) Water supply (domestic, industrial, agricultural).

(ii) Stock watering.

(iii) Fish and shellfish:

Salmonid migration, rearing, spawning, and harvesting.

Other fish migration, rearing, spawning, and harvesting.

Clam, oyster, and mussel rearing, spawning, and harvesting.

Crustaceans and other shellfish (crabs, shrimp, crayfish, scallops, etc.) rearing, spawning, and harvesting.

(iv) Wildlife habitat.

(v) Recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment).

(vi) Commerce and navigation.

(c) Water quality criteria:

(i) Fecal coliform organisms:

(A) Freshwater - fecal coliform organism levels shall both not exceed a geometric mean value of 100 colonies/100 mL, and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 200 colonies/100 mL.

(B) Marine water - fecal coliform organism levels shall both not exceed a geometric mean value of 14 colonies/100 mL, and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 43 colonies/100 mL.

(ii) Dissolved oxygen:

(A) Freshwater - dissolved oxygen shall exceed 8.0 mg/L.

(B) Marine water - dissolved oxygen shall exceed 6.0 mg/L. When natural conditions, such as upwelling, occur, causing the dissolved oxygen to be depressed near or below 6.0 mg/L, natural dissolved oxygen levels may be degraded by up to 0.2 mg/L by human-caused activities.

(iii) Total dissolved gas shall not exceed 110 percent of saturation at any point of sample collection.

(iv) Temperature shall not exceed 18.0°C (freshwater) or 16.0°C (marine water) due to human activities. When natural conditions exceed 18.0°C (freshwater) and 16.0°C (marine water), no temperature increases will be allowed which will raise the receiving water temperature by greater than 0.3°C.

Incremental temperature increases resulting from point source activities shall not, at any time, exceed  $t=28/(T+7)$  (freshwater) or  $t=12/(T-2)$  (marine water). Incremental temperature increases resulting from nonpoint source activities shall not exceed 2.8°C.

For purposes hereof, "t" represents the maximum permissible temperature increase measured at a mixing zone boundary; and "T" represents the background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity of the discharge.

(v) pH shall be within the range of 6.5 to 8.5 (freshwater) or 7.0 to 8.5 (marine water) with a human-caused variation within the above range of less than 0.5 units.

(vi) Turbidity shall not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less,

or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

(vii) Toxic, radioactive, or deleterious material concentrations shall be below those which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department (see WAC 173-201A-040 and 173-201A-050).

(viii) Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.

**(3) Class B (good).**

(a) General characteristic. Water quality of this class shall meet or exceed the requirements for most uses.

(b) Characteristic uses. Characteristic uses shall include, but not be limited to, the following:

(i) Water supply (industrial and agricultural).

(ii) Stock watering.

(iii) Fish and shellfish:

Salmonid migration, rearing, and harvesting.

Other fish migration, rearing, spawning, and harvesting.

Clam, oyster, and mussel rearing and spawning.

Crustaceans and other shellfish (crabs, shrimp, crayfish, scallops, etc.) rearing, spawning, and harvesting.

(iv) Wildlife habitat.

(v) Recreation (secondary contact recreation, sport fishing, boating, and aesthetic enjoyment).

(vi) Commerce and navigation.

(c) Water quality criteria:

(i) Fecal coliform organisms:

(A) Freshwater - fecal coliform organism levels shall both not exceed a geometric mean value of 200 colonies/100 mL, and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 400 colonies/100 mL.

(B) Marine water - fecal coliform organism levels shall both not exceed a geometric mean value of 100 colonies/100 mL, and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 200 colonies/100 mL.

(ii) Dissolved oxygen:

(A) Freshwater - dissolved oxygen shall exceed 6.5 mg/L.

(B) Marine water - dissolved oxygen shall exceed 5.0 mg/L. When natural conditions, such as upwelling, occur, causing the dissolved oxygen to be depressed near or below 5.0 mg/L, natural dissolved oxygen levels may be degraded by up to 0.2 mg/L by human-caused activities.

(iii) Total dissolved gas shall not exceed 110 percent of saturation at any point of sample collection.

(iv) Temperature shall not exceed 21.0°C (freshwater) or 19.0°C (marine water) due to human activities. When natural conditions exceed 21.0°C (freshwater) and 19.0°C (marine water), no temperature increases will be allowed which will raise the receiving water temperature by greater than 0.3°C.

Incremental temperature increases resulting from point source activities shall not, at any time, exceed  $t=34/(T+9)$  (freshwater) or  $t=16/(T)$  (marine water). Incremental

temperature increases resulting from nonpoint source activities shall not exceed 2.8°C.

For purposes hereof, "t" represents the maximum permissible temperature increase measured at a mixing zone boundary; and "T" represents the background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity of the discharge.

(v) pH shall be within the range of 6.5 to 8.5 (freshwater) and 7.0 to 8.5 (marine water) with a human-caused variation within the above range of less than 0.5 units.

(vi) Turbidity shall not exceed 10 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 20 percent increase in turbidity when the background turbidity is more than 50 NTU.

(vii) Toxic, radioactive, or deleterious material concentrations shall be below those which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department (see WAC 173-201A-040 and 173-201A-050).

(viii) Aesthetic values shall not be reduced by dissolved, suspended, floating, or submerged matter not attributed to natural causes, so as to affect water use or taint the flesh of edible species.

**(4) Class C (fair).**

(a) General characteristic. Water quality of this class shall meet or exceed the requirements of selected and essential uses.

(b) Characteristic uses. Characteristic uses shall include, but not be limited to, the following:

(i) Water supply (industrial).

(ii) Fish (salmonid and other fish migration).

(iii) Recreation (secondary contact recreation, sport fishing, boating, and aesthetic enjoyment).

(iv) Commerce and navigation.

(c) Water quality criteria - marine water:

(i) Fecal coliform organism levels shall both not exceed a geometric mean value of 200 colonies/100 mL, and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 400 colonies/100 mL.

(ii) Dissolved oxygen shall exceed 4.0 mg/L. When natural conditions, such as upwelling, occur, causing the dissolved oxygen to be depressed near or below 4.0 mg/L, natural dissolved oxygen levels may be degraded by up to 0.2 mg/L by human-caused activities.

(iii) Temperature shall not exceed 22.0°C due to human activities. When natural conditions exceed 22.0°C, no temperature increases will be allowed which will raise the receiving water temperature by greater than 0.3°C.

Incremental temperature increases shall not, at any time, exceed  $t=20/(T+2)$ .

For purposes hereof, "t" represents the maximum permissible temperature increase measured at a mixing zone boundary; and "T" represents the background temperature as measured at a point or points unaffected by the discharge and representative of the highest ambient water temperature in the vicinity of the discharge.

- (iv) pH shall be within the range of 6.5 to 9.0 with a human-caused variation within a range of less than 0.5 units.
- (v) Turbidity shall not exceed 10 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 20 percent increase in turbidity when the background turbidity is more than 50 NTU.
- (vi) Toxic, radioactive, or deleterious material concentrations shall be below those which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department (see WAC 173-201A-040 and 173-201A-050).
- (vii) Aesthetic values shall not be interfered with by the presence of obnoxious wastes, slimes, aquatic growths, or materials which will taint the flesh of edible species.

**(5) Lake class.**

- (a) General characteristic. Water quality of this class shall meet or exceed the requirements for all or substantially all uses.
- (b) Characteristic uses. Characteristic uses shall include, but not be limited to, the following:
  - (i) Water supply (domestic, industrial, agricultural).
  - (ii) Stock watering.
  - (iii) Fish and shellfish:
    - Salmonid migration, rearing, spawning, and harvesting.
    - Other fish migration, rearing, spawning, and harvesting.
    - Clam and mussel rearing, spawning, and harvesting.
    - Crayfish rearing, spawning, and harvesting.
  - (iv) Wildlife habitat.
  - (v) Recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment).

- (vi) Commerce and navigation.
- (c) Water quality criteria:
  - (i) Fecal coliform organism levels shall both not exceed a geometric mean value of 50 colonies/100 mL, and not have more than 10 percent of all samples obtained for calculating the geometric mean value exceeding 100 colonies/100 mL.
  - (ii) Dissolved oxygen - no measurable decrease from natural conditions.
  - (iii) Total dissolved gas shall not exceed 110 percent of saturation at any point of sample collection.
  - (iv) Temperature - no measurable change from natural conditions.
  - (v) pH - no measurable change from natural conditions.
  - (vi) Turbidity shall not exceed 5 NTU over background conditions.
  - (vii) Toxic, radioactive, or deleterious material concentrations shall be below those which have the potential either singularly or cumulatively to adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the department (see WAC 173-201A-040 and 173-201A-050).
  - (viii) Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.
- (6) **Establishing lake nutrient criteria.**
  - (a) The following table shall be used to aid in establishing nutrient criteria:

(Table 1) The ecoregional and trophic-state action values for establishing nutrient criteria:

<b>Coast Range, Puget Lowlands, and Northern Rockies Ecoregions:</b>		
Trophic State	If Ambient TP (µg/l) Range of Lake is:	Then criteria should be set at:
Ultra-oligotrophic	0-4	4 or less
Oligotrophic	>4-10	10 or less
Lower mesotrophic	>10-20	20 or less
	<u>Action value</u>	
	>20.....	lake specific study may be initiated.
<b>Cascades Ecoregion:</b>		
Trophic State	If Ambient TP (µg/l) Range of Lake is:	Then criteria should be set at:
Ultra-oligotrophic	0-4	4 or less
Oligotrophic	>4-10	10 or less
	<u>Action value</u>	
	>10.....	lake specific study may be initiated.
<b>Columbia Basin Ecoregion:</b>		
Trophic State	If Ambient TP (µg/l) Range of Lake is:	Then criteria should be set at:
Ultra-oligotrophic	0-4	4 or less
Oligotrophic	>4-10	10 or less
Lower mesotrophic	>10-20	20 or less
Upper mesotrophic	>20-35	35 or less
	<u>Action value</u>	
	>35.....	lake specific study may be initiated.

Lakes in the Willamette, East Cascade Foothills, or Blue Mountain ecoregions do not have recommended values and need to have lake-specific studies in order to receive criteria as described in (c)(i) of this subsection.

(b) The following actions are recommended if ambient monitoring of a lake shows the epilimnetic total phosphorus concentration, as shown in Table 1 of this section, is below the action value for an ecoregion:

(i) Determine trophic status from existing or newly gathered data. The recommended minimum sampling to determine trophic status is calculated as the mean of four or more samples collected from the epilimnion between June through September in one or more consecutive years. Sampling must be spread throughout the season.

(ii) Propose criteria at or below the upper limit of the trophic state; or

(iii) Conduct lake-specific study to determine and propose to adopt appropriate criteria as described in (c) of this subsection.

(c) The following actions are recommended if ambient monitoring of a lake shows total phosphorus to exceed the action value for an ecoregion shown in Table 1 of this section or where recommended ecoregional action values do not exist:

(i) Conduct a lake-specific study to evaluate the characteristic uses of the lake. A lake-specific study may vary depending on the source or threat of impairment. Phytoplankton blooms, toxic phytoplankton, or excessive aquatic plants, are examples of various sources of impairment. The following are examples of quantitative measures that a study may describe: Total phosphorus, total nitrogen, chlorophyll-a, dissolved oxygen in the hypolimnion if thermally stratified, pH, hardness, or other measures of existing conditions and potential changes in any one of these parameters.

(ii) Determine appropriate total phosphorus concentrations or other nutrient criteria to protect characteristic lake uses. If the existing total phosphorus concentration is protective of characteristic lake uses, then set criteria at existing total phosphorus concentration. If the existing total phosphorus concentration is not protective of the existing characteristic lake uses, then set criteria at a protective concentration. Proposals to adopt appropriate total phosphorus criteria to protect characteristic uses must be developed by considering technical information and stakeholder input as part of a public involvement process equivalent to the Administrative Procedure Act (chapter 34.05 RCW).

(iii) Determine if the proposed total phosphorus criteria necessary to protect characteristic uses is achievable. If the recommended criterion is not achievable and if the characteristic use the criterion is intended to protect is not an existing use, then a higher criterion may be proposed in conformance with 40 CFR part 131.10.

(d) The department will consider proposed lake-specific nutrient criteria during any water quality standards rule making that follows development of a proposal. Adoption by rule formally establishes the criteria for that lake.

(e) Prioritization and investigation of lakes by the department will be initiated by listing problem lakes in a watershed needs assessment, and scheduled as part of the water quality program's watershed approach to pollution

control. This prioritization will apply to lakes identified as warranting a criteria based on the results of a lake-specific study, to lakes warranting a lake-specific study for establishing criteria, and to lakes requiring restoration and pollution control measures due to exceedance of an established criterion. The adoption of nutrient criteria are generally not intended to apply to lakes or ponds with a surface area smaller than five acres; or to ponds wholly contained on private property owned and surrounded by a single landowner; and nutrients do not drain or leach from these lakes or private ponds to the detriment of other property owners or other water bodies; and do not impact designated uses in the lake. However, if the landowner proposes criteria the department may consider adoption.

(f) The department may not need to set a lake-specific criteria or further investigate a lake if existing water quality conditions are naturally poorer (higher TP) than the action value and uses have not been lost or degraded, per WAC 173-201A-070(2).

[Statutory Authority: Chapter 90.48 RCW and 40 CFR 131. 97-23-064 (Order 94-19), § 173-201A-030, filed 11/18/97, effective 12/19/97. Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-030, filed 11/25/92, effective 12/26/92.]

**WAC 173-201A-040 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 characteristic beneficial uses of waters are being fully protected.

(3) The following criteria shall be applied to all surface waters of the state of Washington for the protection of aquatic life. The department may revise the following criteria on a state-wide or waterbody-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:

Substance	Freshwater		Marine Water	
	Acute	Chronic	Acute	Chronic
Aldrin/Dieldrin	2.5a	0.0019b	0.71a	0.0019b
Ammonia (un-ionized NH <sub>3</sub> ) hh	f,c	g,d	0.233h,c	0.035h,d
Arsenic dd	360.0c	190.0d	69.0c,II	36.0d, cc,II
Cadmium dd	i,c	j,d	42.0c	9.3d
Chlordane	2.4a	0.0043b	0.09a	0.004b
Chloride (Dissolved) k	860.0h,c	230.0h,d	-	-
Chlorine (Total Residual)	19.0c	11.0d	13.0c	7.5d
Chlorpyrifos	0.083c	0.041d	0.011c	0.0056d
Chromium (Hex) dd	15.0c,I,ii	10.0d,jj	1,100.0c,I,II	50.0d,II

Chromium (Tri) gg	m,c	n,d	-	-
Copper dd	o,c	p,d	4.8c,ll	3.1d,ll
Cyanide ee	22.0c	5.2d	1.0c,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,c	r,d	210.0c,ll	8.1d,ll
Mercury s	2.1c,kk,dd	0.012d,ff	1.8c,ll,dd	0.025d,ff
Nickel dd	t,c	u,d	74.0c,ll	8.2d,ll
Parathion	0.065c	0.013d	-	-
Pentachlorophenol (PCP)	w,c	v,d	13.0c	7.9d
Polychlorinated Biphenyls (PCBs)	2.0b	0.014b	10.0b	0.030b
Selenium	20.0c,ff	5.0d,ff	290c,ll,dd	71.0d, x,ll,dd
Silver dd	y,a	-	1.9a,ll	-
Toxaphene	0.73c,z	0.0002d	0.21c,z	0.0002d
Zinc dd	aa,c	bb,d	90.0c,ll	81.0d,ll

## Notes to Table:

- An instantaneous concentration not to be exceeded at any time.
- A 24-hour average not to be exceeded.
- A 1-hour average concentration not to be exceeded more than once every three years on the average.
- A 4-day average concentration not to be exceeded more than once every three years on the average.
- Aldrin is metabolically converted to Dieldrin. Therefore, the sum of the Aldrin and Dieldrin concentrations are compared with the Dieldrin criteria.
- Shall not exceed the numerical value given by:

$$0.52 \div (FT)(FPH)(2)$$

where:  $FT = 10^{[0.03(20-TCAP)]}$ ;  $TCAP \leq T \leq 30$

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

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

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

TCAP = 20°C; Salmonids present.

TCAP = 25°C; Salmonids absent.

- Shall not exceed the numerical value given by:

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

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

$$RATIO =$$

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

where: FT and FPH are as shown in (f) above except:

TCAP = 15°C; Salmonids present.

TCAP = 20°C; Salmonids absent.

- Measured in milligrams per liter rather than micrograms per liter.
- $\leq (0.944)(e^{(1.128[\ln(\text{hardness})]-3.828)})$  at hardness = 100. Conversion factor (CF) of 0.944 is hardness dependent. CF is calculated for other hardnesses as follows:  $CF = 1.136672 - [(\ln \text{hardness})(0.041838)]$ .
- $\leq (0.909)(e^{(0.7852[\ln(\text{hardness})]-3.490)})$  at hardness = 100. Conversion factor (CF) of 0.909 is hardness dependent. CF is calculated for other hardnesses as follows:  $CF = 1.101672 - [(\ln \text{hardness})(0.041838)]$ .
- 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.

- Salinity dependent effects. At low salinity the 1-hour average may not be sufficiently protective.
- $\leq (0.316)e^{(0.8190[\ln(\text{hardness})]+3.688)}$
- $\leq (0.860)e^{(0.8190[\ln(\text{hardness})]+1.561)}$
- $\leq (0.960)(e^{(0.9422[\ln(\text{hardness})]-1.464)})$
- $\leq (0.960)(e^{(0.8545[\ln(\text{hardness})]-1.465)})$
- $\leq (0.791)(e^{(1.273[\ln(\text{hardness})]-1.460)})$  at hardness = 100. Conversion factor (CF) of 0.791 is hardness dependent. CF is calculated for other hardnesses as follows:  $CF = 1.46203 - [(\ln \text{hardness})(0.145712)]$ .
- $\leq (0.791)(e^{(1.273[\ln(\text{hardness})]-4.705)})$  at hardness = 100. Conversion factor (CF) of 0.791 is hardness dependent. CF is calculated for other hardnesses as follows:  $CF = 1.46203 - [(\ln \text{hardness})(0.145712)]$ .
- 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.
- $\leq (0.998)(e^{(0.8460[\ln(\text{hardness})]+3.3612)})$
- $\leq (0.997)(e^{(0.8460[\ln(\text{hardness})]+1.1645)})$
- $\leq e^{[1.005(\text{pH})-5.290]}$
- $\leq e^{[1.005(\text{pH})-4.830]}$
- The status of the fish community should be monitored whenever the concentration of selenium exceeds 5.0 ug/l in salt water.
- $\leq (0.85)(e^{(1.72[\ln(\text{hardness})]-6.52)})$
- Channel Catfish may be more acutely sensitive.
- $\leq (0.978)(e^{(0.8473[\ln(\text{hardness})]+0.8604)})$
- $\leq (0.986)(e^{(0.8473[\ln(\text{hardness})]+0.7614)})$
- 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.
- 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. 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.
- The criteria for cyanide is based on the weak and dissociable method in the 17th Ed. *Standard Methods for the Examination of Water and Wastewater*, 4500-CN I, and as revised (see footnote dd, above).
- These criteria are based on the total-recoverable fraction of the metal.
- Where methods to measure trivalent chromium are unavailable, these criteria are to be represented by total-recoverable chromium.
- 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. Conversion factor to calculate dissolved metal concentration is 0.982.
- jj. Conversion factor to calculate dissolved metal concentration is 0.962.
- kk. Conversion factor to calculate dissolved metal concentration is 0.85.
- ll. Marine conversion factors (CF) used for calculating dissolved metals concentrations. Conversion factors are applicable to both acute and chronic criteria for all metals except mercury. CF for mercury is applicable to the acute criterion only. 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: 9.1µg/l chronic and 2.8µg/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.

(4) *USEPA Quality Criteria for Water, 1986* 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 CFR 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.

[Statutory Authority: Chapter 90.48 RCW and 40 CFR 131. 97-23-064 (Order 94-19), § 173-201A-040, filed 11/18/97, effective 12/19/97. Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-040, filed 11/25/92, effective 12/26/92.]

**Reviser's note:** The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency.

**WAC 173-201A-050 Radioactive substances.** (1) Deleterious concentrations of radioactive materials for all classes shall be as determined by the lowest practicable concentration attainable and in no case shall exceed:

(a) 1/12.5 of the values listed in WAC 246-221-290 (Column 2, Table II, effluent concentrations, rules and regulations for radiation protection); or

(b) USEPA Drinking Water Regulations for radionuclides, as published in the Federal Register of July 9, 1976, or subsequent revisions thereto.

(2) Nothing in this chapter shall be interpreted to be applicable to those aspects of governmental regulation of radioactive waters which have been preempted from state regulation by the Atomic Energy Act of 1954, as amended, as interpreted by the United States Supreme Court in the cases of *Northern States Power Co. v. Minnesota 405 U.S.*

*1035 (1972) and Train v. Colorado Public Interest Research Group, 426 U.S. 1 (1976).*

[Statutory Authority: Chapter 90.48 RCW and 40 CFR 131. 97-23-064 (Order 94-19), § 173-201A-050, filed 11/18/97, effective 12/19/97. Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-050, filed 11/25/92, effective 12/26/92.]

**WAC 173-201A-060 General considerations.** The following general guidelines shall apply to the water quality criteria and classifications set forth in WAC 173-201A-030 through 173-201A-140 hereof:

(1) At the boundary between waters of different classifications, the water quality criteria for the higher classification shall prevail.

(2) In brackish waters of estuaries, where the fresh and marine water quality criteria differ within the same classification, the criteria shall be applied on the basis of vertically averaged salinity. The freshwater criteria shall be applied at any point where ninety-five percent of the vertically averaged daily maximum salinity values are less than or equal to one part per thousand. Marine criteria shall apply at all other locations; except that the marine water quality criteria shall apply for dissolved oxygen when the salinity is one part per thousand or greater and for fecal coliform organisms when the salinity is ten parts per thousand or greater.

(3) In determining compliance with the fecal coliform criteria in WAC 173-201A-030, averaging of data collected beyond a thirty-day period, or beyond a specific discharge event under investigation, shall not be permitted when such averaging would skew the data set so as to mask noncompliance periods.

(4)(a) The water quality criteria herein established for total dissolved gas shall not apply when the stream flow exceeds the seven-day, ten-year frequency flood.

(b) The total dissolved gas criteria may be adjusted to aid fish passage over hydroelectric dams when consistent with a department approved gas abatement plan. This gas abatement plan must be accompanied by fisheries management and physical and biological monitoring plans. The elevated total dissolved gas levels are intended to allow increased fish passage without causing more harm to fish populations than caused by turbine fish passage. The specific allowances for total dissolved gas exceedances are listed as special conditions for sections of the Snake and Columbia rivers in WAC 173-201A-130 and as shown in the following exemption:

**Special fish passage exemption for sections of the Snake and Columbia rivers:** When spilling water at dams is necessary to aid fish passage, total dissolved gas must not exceed an average of one hundred fifteen percent as measured at Camas/Washougal below Bonneville dam or as measured in the forebays of the next downstream dams. Total dissolved gas must also not exceed an average of one hundred twenty percent as measured in the tailraces of each dam. These averages are based on the twelve highest hourly readings in any one day of total dissolved gas. In addition, there is a maximum total dissolved gas one hour average of one hundred twenty-five percent, relative to atmospheric pressure, during spillage for fish passage. These special conditions for total dissolved gas in the Snake and Columbia

rivers are viewed as temporary and are to be reviewed by the year 2003.

(c) Nothing in these special conditions allows an impact to existing and characteristic uses.

(5) Waste discharge permits, whether issued pursuant to the National Pollutant Discharge Elimination System or otherwise, shall be conditioned so the discharges authorized will meet the water quality standards.

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

(b) Permits shall be subject to modification by the department whenever it appears to the department the discharge violates water quality standards. Modification of permits, as provided herein, shall be subject to review in the same manner as originally issued permits.

(6) No waste discharge permit shall be issued which results in a violation of established water quality criteria, except as provided for under WAC 173-201A-100 or 173-201A-110.

(7) Due consideration will be given to the precision and accuracy of the sampling and analytical methods used as well as existing conditions at the time, in the application of the criteria.

(8) The analytical testing methods for these criteria shall be in accordance with the *"Guidelines Establishing Test Procedures for the Analysis of Pollutants"* (40 C.F.R. Part 136) and other or superseding methods published and/or approved by the department following consultation with adjacent states and concurrence of the USEPA.

(9) Nothing in this chapter shall be interpreted to prohibit the establishment of effluent limitations for the control of the thermal component of any discharge in accordance with Section 316 of the federal Clean Water Act (33 U.S.C. 1251 et seq.).

(10) The primary means for protecting water quality in wetlands is through implementing the antidegradation procedures section (WAC 173-201A-070).

(a) In addition to designated uses, wetlands may have existing beneficial uses that are to be protected that include ground water exchange, shoreline stabilization, and storm water attenuation.

(b) Water quality in wetlands is maintained and protected by maintaining the hydrologic conditions, hydrophytic vegetation, and substrate characteristics necessary to support existing and designated uses.

(c) Wetlands shall be delineated using the Washington State Wetlands Identification and Delineation Manual, in accordance with WAC 173-22-035.

[Statutory Authority: Chapter 90.48 RCW and 40 CFR 131. 97-23-064 (Order 94-19), § 173-201A-060, filed 11/18/97, effective 12/19/97. Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-060, filed 11/25/92, effective 12/26/92.]

**WAC 173-201A-110 Short-term modifications.** The criteria and special conditions established in WAC 173-201A-030 through 173-201A-140 may be modified for a specific water body on a short-term basis when necessary to accommodate essential activities, respond to emergencies, or to otherwise protect the public interest, even though such activities may result in a temporary reduction of water

quality conditions below those criteria and classifications established by this regulation. Such activities must be conditioned, timed, and restricted (i.e., hours or days rather than weeks or months) in a manner that will minimize water quality degradation to existing and characteristic uses. In no case will any degradation of water quality be allowed if this degradation significantly interferes with or becomes injurious to characteristic water uses or causes long-term harm to the environment.

(1) A short-term modification may be issued in writing by the director or his/her designee to an individual or entity proposing the aquatic application of pesticides, including but not limited to those used for control of federally or state listed noxious and invasive species, and excess populations of native aquatic plants, mosquitoes, burrowing shrimp, and fish, subject to the following terms and conditions:

(a) A short-term modification will in no way lessen or remove the project proponent's obligations and liabilities under other federal, state and local rules and regulations.

(b) A request for a short-term modification shall be made to the department on forms supplied by the department. Such request shall be made at least thirty days prior to initiation of the proposed activity, and after the project proponent has complied with the requirements of the State Environmental Policy Act (SEPA);

(c) A short-term modification shall be valid for the duration of the activity requiring modification of the criteria and special conditions in WAC 173-201A-030 through 173-201A-140, or for one year, whichever is less. Ecology may authorize a longer duration where the activity is part of an ongoing or long-term operation and maintenance plan, integrated pest or noxious weed management plan, waterbody or watershed management plan, or restoration plan. Such a plan must be developed through a public involvement process consistent with the Administrative Procedure Act (chapter 34.05 RCW) and be in compliance with SEPA, chapter 43.21C RCW, in which case the standards may be modified for the duration of the plan, or for five years, whichever is less;

(d) Appropriate public notice as determined and prescribed by the director or his/her designee shall be given, identifying the pesticide, applicator, location where the pesticide will be applied, proposed timing and method of application, and any water use restrictions specified in USEPA label provisions;

(e) The pesticide application shall be made at times so as to:

(i) Minimize public water use restrictions during weekends; and

(ii) Avoid public water use restrictions during the opening week of fishing season, Memorial Day weekend, Independence Day weekend, and Labor Day weekend;

(f) Any additional conditions as may be prescribed by the director or his/her designee.

(2) A short-term modification may be issued for the control or eradication of noxious weeds identified as such in accordance with the state noxious weed control law, chapter 17.10 RCW, and Control of spartina and purple loosestrife, chapter 17.26 RCW. Short-term modifications for noxious weed control shall be included in a water quality permit issued in accordance with RCW 90.48.445, and the following requirements:

(a) Water quality permits for noxious weed control may be issued to the Washington state department of agriculture (WSDA) for the purposes of coordinating and conducting noxious weed control activities consistent with their responsibilities under chapter 17.10 and 17.26 RCW. Coordination may include noxious weed control activities identified in a WSDA integrated noxious weed management plan and conducted by individual landowners or land managers.

(b) Water quality permits may also be issued to individual landowners or land managers for noxious weed control activities where such activities are not covered by a WSDA integrated noxious weed management plan.

(3) The turbidity criteria established under WAC 173-201A-030 shall be modified to allow a temporary mixing zone during and immediately after necessary in-water or shoreline construction activities that result in the disturbance of in-place sediments. A temporary turbidity mixing zone is subject to the constraints of WAC 173-201A-100 (4) and (6) and is authorized only after the activity has received all other necessary local and state permits and approvals, and after the implementation of appropriate best management practices to avoid or minimize disturbance of in-place sediments and exceedances of the turbidity criteria. A temporary turbidity mixing zone shall be as follows:

(a) For waters up to 10 cfs flow at the time of construction, the point of compliance shall be one hundred feet downstream from activity causing the turbidity exceedance.

(b) For waters above 10 cfs up to 100 cfs flow at the time of construction, the point of compliance shall be two hundred feet downstream of activity causing the turbidity exceedance.

(c) For waters above 100 cfs flow at the time of construction, the point of compliance shall be three hundred feet downstream of activity causing the turbidity exceedance.

(d) For projects working within or along lakes, ponds, wetlands, estuaries, marine waters or other nonflowing waters, the point of compliance shall be at a radius of one hundred fifty feet from activity causing the turbidity exceedance.

[Statutory Authority: Chapter 90.48 RCW and 40 CFR 131. 97-23-064 (Order 94-19), § 173-201A-110, filed 11/18/97, effective 12/19/97. Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-110, filed 11/25/92, effective 12/26/92.]

**WAC 173-201A-130 Specific classifications—Freshwater.** Specific fresh surface waters of the state of Washington are classified as follows:

- (1) American River. Class AA
- (2) Big Quilcene River and tributaries. Class AA
- (3) Bumping River. Class AA
- (4) Burnt Bridge Creek. Class A
- (5) Cedar River from Lake Washington to the Maplewood Bridge (river mile 4.1). Class A
- (6) Cedar River and tributaries from the Maplewood Bridge (river mile 4.1) to Landsburg Dam (river mile 21.6). Class AA
- (7) Cedar River and tributaries from Landsburg Dam (river mile 21.6) to headwaters. Special condition - no waste discharge will be permitted. Class AA
- (8) Chehalis River from upper boundary of Grays Harbor at Cosmopolis (river mile 3.1, longitude 123°45'45" W) to Scammon Creek (river mile 65.8). Class A

- (9) Chehalis River from Scammon Creek (river mile 65.8) to Newaukum River (river mile 75.2). Special condition - dissolved oxygen shall exceed 5.0 mg/L from June 1 to September 15. For the remainder of the year, the dissolved oxygen shall meet Class A criteria. Class A
- (10) Chehalis River from Newaukum River (river mile 75.2) to Rock Creek (river mile 106.7). Class A
- (11) Chehalis River, from Rock Creek (river mile 106.7) to headwaters. Class AA
- (12) Chehalis River, south fork. Class AA
- (13) Chewuch River. Class AA
- (14) Chiwawa River. Class AA
- (15) Cispus River. Class AA
- (16) Clearwater River. Class A
- (17) Cle Elum River. Class AA
- (18) Cloquallum Creek. Class A
- (19) Clover Creek from outlet of Lake Spanaway to inlet of Lake Steilacoom. Class A
- (20) Columbia River from mouth to the Washington-Oregon border (river mile 309.3). Special conditions - temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed 0.3°C due to any single source or 1.1°C due to all such activities combined. Dissolved oxygen shall exceed 90 percent of saturation. Special condition - special fish passage exemption as described in WAC 173-201A-060 (4)(b). Class A
- (21) Columbia River from Washington-Oregon border (river mile 309.3) to Grand Coulee Dam (river mile 596.6). Special condition from Washington-Oregon border (river mile 309.3) to Priest Rapids Dam (river mile 397.1). Temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed  $t=34/(T+9)$ . Special condition - special fish passage exemption as described in WAC 173-201A-060 (4)(b). Class A
- (22) Columbia River from Grand Coulee Dam (river mile 596.6) to Canadian border (river mile 745.0). Class AA
- (23) Colville River. Class A
- (24) Coweeman River from mouth to Mulholland Creek (river mile 18.4). Class A
- (25) Coweeman River from Mulholland Creek (river mile 18.4) to headwaters. Class AA
- (26) Cowlitz River from mouth to base of Riffe Lake Dam (river mile 52.0). Class A
- (27) Cowlitz River from base of Riffe Lake Dam (river mile 52.0) to headwaters. Class AA
- (28) Crab Creek and tributaries. Class B
- (29) Decker Creek. Class AA
- (30) Deschutes River from mouth to boundary of Snoqualmie National Forest (river mile 48.2). Class A
- (31) Deschutes River from boundary of Snoqualmie National Forest (river mile 48.2) to headwaters. Class AA
- (32) Dickey River. Class A
- (33) Dosewallips River and tributaries. Class AA
- (34) Duckabush River and tributaries. Class AA
- (35) Dungeness River from mouth to Canyon Creek (river mile 10.8). Class A
- (36) Dungeness River and tributaries from Canyon Creek (river mile 10.8) to headwaters. Class AA
- (37) Duwamish River from mouth south of a line bearing 254° true from the NW corner of berth 3, terminal No. 37 to the Black River (river mile 11.0) (Duwamish River continues as the Green River above the Black River). Class B
- (38) Elochoman River. Class A
- (39) Elwha River and tributaries. Class AA
- (40) Entiat River from Wenatchee National Forest boundary (river mile 20.5) to headwaters. Class AA



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| (41) Grande Ronde River from mouth to Oregon border (river mile 37). Special condition - temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed $t=34/(T+9)$ . | Class A    | (69) Nisqually River from mouth to Alder Dam (river mile 44.2).   | Class A  |
| (42) Grays River from Grays River Falls (river mile 15.8) to headwaters.  | Class AA   | (70) Nisqually River from Alder Dam (river mile 44.2) to headwaters.  | Class AA |
| (43) Green River (Cowlitz County).  | Class AA   | (71) Nooksack River from mouth to Maple Creek (river mile 49.7).  | Class A  |
| (44) Green River (King County) from Black River (river mile 11.0 and point where Duwamish River continues as the Green River) to west boundary of Sec. 27-T21N-R6E (west boundary of Flaming Geyser State Park at river mile 42.3).   | Class A    | (72) Nooksack River from Maple Creek (river mile 49.7) to headwaters.   | Class AA |
| (45) Green River (King County) from west boundary of Sec. 27-T21N-R6E (west boundary of Flaming Geyser State Park, river mile 42.3) to west boundary of Sec. 13-T21N-R7E (river mile 59.1).   | Class AA   | (73) Nooksack River, south fork, from mouth to Skookum Creek (river mile 14.3).   | Class A  |
| (46) Green River and tributaries (King County) from west boundary of Sec. 13-T21N-R7E (river mile 59.1) to headwaters. Special condition - no waste discharge will be permitted.  | Class AA   | (74) Nooksack River, south fork, from Skookum Creek (river mile 14.3) to headwaters.  | Class AA |
| (47) Hamma Hamma River and tributaries.   | Class AA   | (75) Nooksack River, middle fork.   | Class AA |
| (48) Hanaford Creek from mouth to east boundary of Sec. 25-T15N-R2W (river mile 4.1). Special condition - dissolved oxygen shall exceed 6.5 mg/L.   | Class A    | (76) Okanogan River.  | Class A  |
| (49) Hanaford Creek from east boundary of Sec. 25-T15N-R2W (river mile 4.1) to headwaters.  | Class A    | (77) Palouse River from mouth to south fork (Colfax, river mile 89.6).  | Class B  |
| (50) Hoh River and tributaries.   | Class AA   | (78) Palouse River from south fork (Colfax, river mile 89.6) to Idaho border (river mile 123.4). Special condition - temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed $t=34/(T+9)$ .   | Class A  |
| (51) Hoquiam River (continues as west fork above east fork) from mouth to river mile 9.3 (Dekay Road Bridge) (upper limit of tidal influence).  | Class B    | (79) Pend Oreille River from Canadian border (river mile 16.0) to Idaho border (river mile 87.7). Special condition - temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed $t=34/(T+9)$ .  | Class A  |
| (52) Humptulips River and tributaries from mouth to Olympic National Forest boundary on east fork (river mile 12.8) and west fork (river mile 40.4) (main stem continues as west fork).   | Class A    | (80) Pilchuck River from city of Snohomish Waterworks Dam (river mile 26.8) to headwaters.  | Class AA |
| (53) Humptulips River, east fork from Olympic National Forest boundary (river mile 12.8) to headwaters.   | Class AA   | (81) Puyallup River from mouth to river mile 1.0.   | Class B  |
| (54) Humptulips River, west fork from Olympic National Forest boundary (river mile 40.4) to headwaters.   | Class AA   | (82) Puyallup River from river mile 1.0 to Kings Creek (river mile 31.6).   | Class A  |
| (55) Issaquah Creek.  | Class A    | (83) Puyallup River from Kings Creek (river mile 31.6) to headwaters.   | Class AA |
| (56) Kalama River from lower Kalama River Falls (river mile 10.4) to headwaters.  | Class AA   | (84) Queets River and tributaries.  | Class AA |
| (57) Klickitat River from Little Klickitat River (river mile 19.8) to boundary of Yakima Indian Reservation.  | Class AA   | (85) Quillayute River.  | Class AA |
| (58) Lake Washington Ship Canal from Government Locks (river mile 1.0) to Lake Washington (river mile 8.6). Special condition - salinity shall not exceed one part per thousand (1.0 ppt) at any point or depth along a line that transects the ship canal at the University Bridge (river mile 6.1).   | Lake Class | (86) Quinault River and tributaries.  | Class AA |
| (59) Lewis River, east fork, from Multon Falls (river mile 24.6) to headwaters.   | Class AA   | (87) Salmon Creek (Clark County).   | Class A  |
| (60) Little Wenatchee River.  | Class AA   | (88) Satsop River from mouth to west fork (river mile 6.4).   | Class A  |
| (61) Methow River from mouth to Chewuch River (river mile 50.1).  | Class A    | (89) Satsop River, east fork.   | Class AA |
| (62) Methow River from Chewuch River (river mile 50.1) to headwaters.   | Class AA   | (90) Satsop River, middle fork.   | Class AA |
| (63) Mill Creek from mouth to 13th Street Bridge in Walla Walla (river mile 6.4). Special condition - dissolved oxygen concentration shall exceed 5.0 mg/L.   | Class B    | (91) Satsop River, west fork.   | Class AA |
| (64) Mill Creek from 13th Street Bridge in Walla Walla (river mile 6.4) to Walla Walla Waterworks Dam (river mile 11.5).  | Class A    | (92) Skagit River from mouth to Skiyou Slough-lower end (river mile 25.6).  | Class A  |
| (65) Mill Creek and tributaries from city of Walla Walla Waterworks Dam (river mile 21.6) to headwaters. Special condition - no waste discharge will be permitted.  | Class AA   | (93) Skagit River and tributaries (includes Baker, Suak, Suiattle, and Cascade rivers) from Skiyou Slough-lower end, (river mile 25.6) to Canadian border (river mile 127.0). Special condition - Skagit River (Gorge by-pass reach) from Gorge Dam (river mile 96.6) to Gorge Powerhouse (river mile 94.2). Temperature shall not exceed 21°C due to human activities. When natural conditions exceed 21°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C, nor shall such temperature increases, at any time, exceed $t=34/(T+9)$ . | Class AA |
| (66) Naches River from Snoqualmie National Forest boundary (river mile 35.7) to headwaters.   | Class AA   | (94) Skokomish River and tributaries.   | Class AA |
| (67) Naselle River from Naselle "Falls" (cascade at river mile 18.6) to headwaters.   | Class AA   | (95) Skookumchuck River from Bloody Run Creek (river mile 21.4) to headwaters.  | Class AA |
| (68) Newaukum River.  | Class A    | (96) Skykomish River from mouth to May Creek (above Gold Bar at river mile 41.2).   | Class A  |
|   |            | (97) Skykomish River from May Creek (above Gold Bar at river mile 41.2) to headwaters.  | Class AA |

(98)	Snake River from mouth to Washington-Idaho-Oregon border (river mile 176.1). Special condition:			
(a)	Below Clearwater River (river mile 139.3). Temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed $t=34/(T+9)$ . Special condition - special fish passage exemption as described in WAC 173-201A-060 (4)(b).			
(b)	Above Clearwater River (river mile 139.3). Temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C, no temperature increases will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed 0.3°C due to any single source or 1.1°C due to all such activities combined.	Class A		
(99)	Snohomish River from mouth and east of longitude 122°13'40"W upstream to latitude 47°56'30"N (southern tip of Ebey Island at river mile 8.1). Special condition - fecal coliform organism levels shall both not exceed a geometric mean value of 200 colonies/100 mL and not have more than 10 percent of the samples obtained for calculating the mean value exceeding 400 colonies/100 mL.	Class A		
(100)	Snohomish River upstream from latitude 47°56'30"N (southern tip of Ebey Island river mile 8.1) to confluence with Skykomish and Snoqualmie River (river mile 20.5).	Class A		
(101)	Snoqualmie River and tributaries from mouth to west boundary of Twin Falls State Park on south fork (river mile 9.1).	Class A		
(102)	Snoqualmie River, middle fork.	Class AA		
(103)	Snoqualmie River, north fork.	Class AA		
(104)	Snoqualmie River, south fork, from west boundary of Twin Falls State Park (river mile 9.1) to headwaters.	Class AA		
(105)	Soleduck River and tributaries.	Class AA		
(106)	Spokane River from mouth to Long Lake Dam (river mile 33.9). Special condition - temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed $t=34/(T+9)$ .	Class A		
(107)	Spokane River from Long Lake Dam (river mile 33.9) to Nine Mile Bridge (river mile 58.0). Special conditions:			
(a)	The average euphotic zone concentration of total phosphorus (as P) shall not exceed 25µg/L during the period of June 1 to October 31.			
(b)	Temperature shall not exceed 20.0°C, due to human activities. When natural conditions exceed 20.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed $t=34/(T+9)$ .	Lake Class		
(108)	Spokane River from Nine Mile Bridge (river mile 58.0) to the Idaho border (river mile 96.5). Temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time exceed $t=34/(T+9)$ .	Class A		
(109)	Stehekin River.	Class AA		
(110)	Stillaguamish River from mouth to north and south forks (river mile 17.8).	Class A		
(111)	Stillaguamish River, north fork, from mouth to Squire Creek (river mile 31.2).	Class A		
(112)	Stillaguamish River, north fork, from Squire Creek (river mile 31.2) to headwaters.	Class AA		
(113)	Stillaguamish River, south fork, from mouth to Canyon Creek (river mile 33.7).	Class A		
(114)	Stillaguamish River, south fork, from Canyon Creek (river mile 33.7) to headwaters.	Class AA		
(115)	Sulphur Creek.	Class B		
(116)	Sultan River from mouth to Chaplain Creek (river mile 5.9).	Class A		
(117)	Sultan River and tributaries from Chaplain Creek (river mile 5.9) to headwaters. Special condition - no waste discharge will be permitted above city of Everett Diversion Dam (river mile 9.4).	Class AA		
(118)	Sumas River from Canadian border (river mile 12) to headwaters (river mile 23).	Class A		
(119)	Tieton River.	Class AA		
(120)	Tolt River, south fork and tributaries from mouth to west boundary of Sec. 31-T26N-R9E (river mile 6.9).	Class AA		
(121)	Tolt River, south fork from west boundary of Sec. 31-T26N-R9E (river mile 6.9) to headwaters. Special condition - no waste discharge will be permitted.	Class AA		
(122)	Touchet River, north fork from Dayton water intake structure (river mile 3.0) to headwaters.	Class AA		
(123)	Toutle River, north fork, from Green River to headwaters.	Class AA		
(124)	Toutle River, south fork.	Class AA		
(125)	Tucannon River from Umatilla National Forest boundary (river mile 38.1) to headwaters.	Class AA		
(126)	Twisp River.	Class AA		
(127)	Union River and tributaries from Bremerton Waterworks Dam (river mile 6.9) to headwaters. Special condition - no waste discharge will be permitted.	Class AA		
(128)	Walla Walla River from mouth to Lowden (Dry Creek at river mile 27.2).	Class B		
(129)	Walla Walla River from Lowden (Dry Creek at river mile 27.2) to Oregon border (river mile 40). Special condition - temperature shall not exceed 20.0°C due to human activities. When natural conditions exceed 20.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed $t=34/(T+9)$ .	Class A		
(130)	Wenatchee River from Wenatchee National Forest boundary (river mile 27.1) to headwaters.	Class AA		
(131)	White River (Pierce-King counties) from Mud Mountain Dam (river mile 27.1) to headwaters.	Class AA		
(132)	White River (Chelan County).	Class AA		
(133)	Wildcat Creek.	Class A		
(134)	Willapa River upstream of a line bearing 70° true through Mailboat Slough light (river mile 1.8).	Class A		
(135)	Wishkah River from mouth to river mile 6 (SW 1/4 SW 1/4 NE 1/4 Sec. 21-T18N-R9W).	Class B		

- (136) Wishkah River from river mile 6 (SW 1/4 SW 1/4 NE 1/4 Sec. 21-T18N-R9W) to west fork (river mile 17.7). Class A
- (137) Wishkah River from west fork of Wishkah River (river mile 17.7) to south boundary of Sec. 33-T21N-R8W (river mile 32.0). Class AA
- (138) Wishkah River and tributaries from south boundary of Sec. 33-T21N-R8W (river mile 32.0) to headwaters. Special condition - no waste discharge will be permitted. Class AA
- (139) Wynoochee River from mouth to Olympic National Forest boundary (river mile 45.9). Class A
- (140) Wynoochee River from Olympic National Forest boundary (river mile 45.9) to headwaters. Class AA
- (141) Yakima River from mouth to Cle Elum River (river mile 185.6). Special condition - temperature shall not exceed 21.0°C due to human activities. When natural conditions exceed 21.0°C, no temperature increase will be allowed which will raise the receiving water temperature by greater than 0.3°C; nor shall such temperature increases, at any time, exceed  $t=34/(T+9)$ . Class A
- (142) Yakima River from Cle Elum River (river mile 185.6) to headwaters. Class AA
- (15) Oakland Bay west of longitude 123°05' W (inner Shelton harbor). Class B
- (16) Port Angeles south and west of a line bearing 152° true from buoy "2" at the tip of Ediz Hook. Class A
- (17) Port Gamble south of latitude 47°51'20"N. Class A
- (18) Port Townsend west of a line between Point Hudson and Kala Point. Class A
- (19) Possession Sound, south of latitude 47°57'N. Class AA
- (20) Possession Sound, Port Susan, Saratoga Passage, and Skagit Bay east of Whidbey Island and State Highway 20 Bridge at Deception Pass between latitude 47°57'N (Mukilteo) and latitude 48°27'20"N (Similk Bay), except as otherwise noted. Class A
- (21) Puget Sound through Admiralty Inlet and South Puget Sound, south and west to longitude 122°52'30" W (Brisco Point) and longitude 122°51' W (northern tip of Hartstene Island). Class AA
- (22) Sequim Bay southward of entrance. Class AA
- (23) South Puget Sound west of longitude 122°52'30" W (Brisco Point) and longitude 122°51' W (northern tip of Hartstene Island, except as otherwise noted). Class A
- (24) Strait of Juan de Fuca. Class AA
- (25) Totten Inlet and Little Skookum Inlet, west of longitude 122°56'32" (west side of Steamboat Island). Class AA
- (26) Willapa Bay seaward of a line bearing 70° true through Mailboat Slough light (Willapa River, river mile 1.8). Class A

[Statutory Authority: Chapter 90.48 RCW and 40 CFR 131. 97-23-064 (Order 94-19), § 173-201A-130, filed 11/18/97, effective 12/19/97. Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-130, filed 11/25/92, effective 12/26/92.]

[Statutory Authority: Chapter 90.48 RCW and 40 CFR 131. 97-23-064 (Order 94-19), § 173-201A-140, filed 11/18/97, effective 12/19/97. Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-140, filed 11/25/92, effective 12/26/92.]

**WAC 173-201A-140 Specific classifications—Marine water.** Specific marine surface waters of the state of Washington are classified as follows:

- (1) Budd Inlet south of latitude 47°04'N (south of Priest Point Park). Class B
- (2) Coastal waters: Pacific Ocean from Ilwaco to Cape Flattery. Class AA
- (3) Commencement Bay south and east of a line bearing 258° true from "Brown's Point" and north and west of line bearing 225° true through the Hylebos waterway light. Class A
- (4) Commencement Bay, inner, south and east of a line bearing 225° true through Hylebos waterway light except the city waterway south and east of south 11th Street. Class B
- (5) Commencement Bay, city waterway south and east of south 11th Street. Class C
- (6) Drayton Harbor, south of entrance. Class A
- (7) Dyes and Sinclair Inlets west of longitude 122°37'W. Class A
- (8) Elliott Bay east of a line between Pier 91 and Duwamish head. Class A
- (9) Everett Harbor, inner, northeast of a line bearing 121° true from approximately 47°59'5"N and 122°13'44"W (southwest corner of the pier). Class B
- (10) Grays Harbor west of longitude 123°59'W. Class A
- (11) Grays Harbor east of longitude 123°59'W to longitude 123°45'45"W (Cosmopolis Chehalis River, river mile 3.1). Special condition - dissolved oxygen shall exceed 5.0 mg/L. Class B
- (12) Guemes Channel, Padilla, Samish and Bellingham Bays east of longitude 122°39' W and north of latitude 48°27'20"N. Class A
- (13) Hood Canal. Class AA
- (14) Mukilteo and all North Puget Sound west of longitude 122°39' W (Whidbey, Fidalgo, Guemes and Lummi islands and State Highway 20 Bridge at Deception Pass), except as otherwise noted. Class AA

**WAC 173-201A-160 Implementation.** (1) **Discharges from municipal, commercial, and industrial operations.** The primary means to be used for controlling municipal, commercial, and industrial waste discharges shall be through the issuance of waste disposal permits, as provided for in RCW 90.48.160, 90.48.162, and 90.48.260.

(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) Allowance for compliance schedules.**

(a) Permits, orders, and directives of the department for existing discharges may include a schedule for achieving compliance with water quality criteria contained in this chapter. Such schedules of compliance shall be developed to ensure final compliance with all water quality-based effluent limits in the shortest practicable time. Decisions regarding 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. Schedules of compliance may be issued to allow for: (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 following implementation of an initial set of best management practices; (iv) completion of necessary water quality studies; or (v) resolution of a pending water quality standards' issue through rule-making action.

(b) For the period of time during which compliance with water quality criteria is deferred, interim effluent limitations shall be formally established, based on the best professional judgment of the department. Interim effluent limitations may be numeric or nonnumeric (e.g., construction of necessary facilities by a specified date as contained in an ecology order or permit).

(c) Prior to establishing a schedule of compliance, the department shall require the discharger to evaluate the possibility of achieving water quality criteria via nonconstruction changes (e.g., facility operation, pollution prevention). Schedules of compliance may in no case exceed ten years, and shall generally not exceed the term of any permit.

[Statutory Authority: Chapter 90.48 RCW and 40 CFR 131. 97-23-064 (Order 94-19), § 173-201A-160, filed 11/18/97, effective 12/19/97. Statutory Authority: Chapter 90.48 RCW. 92-24-037 (Order 92-29), § 173-201A-160, filed 11/25/92, effective 12/26/92.]

**Chapter 173-223 WAC**

**INTERIM WASTEWATER DISCHARGE PERMIT FEES**

**WAC**

173-223-015 through 173-223-110 Repealed.

**DISPOSITION OF SECTIONS FORMERLY REPEALED IN THIS CHAPTER**

- 173-223-015 Purpose and authority. [Statutory Authority: Chapter 43.21A RCW. 89-05-026 (Order 88-53), § 173-223-015, filed 2/13/89; 88-12-035 (Order 88-8), § 173-223-015, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-020 Applicability. [Statutory Authority: Chapter 43.21A RCW. 88-12-035 (Order 88-8), § 173-223-020, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-030 Definitions. [Statutory Authority: Chapter 43.21A RCW. 89-05-026 (Order 88-53), § 173-223-030, filed 2/13/89; 88-12-035 (Order 88-8), § 173-223-030, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-040 Permit fee schedule. [Statutory Authority: Chapter 43.21A RCW. 89-05-026 (Order 88-53), § 173-223-040, filed 2/13/89; 88-12-035 (Order 88-8), § 173-223-040, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-050 Permit fee payments. [Statutory Authority: Chapter 43.21A RCW. 89-05-026 (Order 88-53), § 173-223-050, filed 2/13/89; 88-12-035 (Order 88-8), § 173-223-050, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-060 Permits issued by other governmental agencies. [Statutory Authority: Chapter 43.21A RCW. 88-12-035 (Order 88-8), § 173-223-060, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-070 Credits. [Statutory Authority: Chapter 43.21A RCW. 89-05-026 (Order 88-53), § 173-223-070, filed 2/13/89; 88-12-035 (Order 88-8), § 173-223-070, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-080 Transfer of ownership or control. [Statutory Authority: Chapter 43.21A RCW. 88-12-035 (Order 88-8), § 173-223-080, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-090 Administrative appeals to the director. [Statutory Authority: Chapter 43.21A RCW. 89-05-026 (Order 88-53), § 173-223-090, filed 2/13/89; 88-12-035 (Order 88-8), § 173-223-090, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-100 Deposits. [Statutory Authority: Chapter 43.21A RCW. 88-12-035 (Order 88-8), § 173-223-100, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.
- 173-223-110 Past due payments. [Statutory Authority: Chapter 43.21A RCW. 88-12-035 (Order 88-8), § 173-223-110, filed 5/26/88, effective 7/1/88.] Repealed by 89-12-027 and 97-22-043 (Orders 89-8 and 97-26), filed 5/31/89 and 10/31/97, effective 12/1/97. Statutory Authority: Chapter 43.21A RCW.

**WAC 173-223-015 through 173-223-110 Repealed.**  
See Disposition Table at beginning of this chapter.

### Chapter 173-309 WAC

#### HAZARDOUS WASTE CLEANUP ACT—LOCAL TOXICS CONTROL ACCOUNT—INTERIM FINANCIAL ASSISTANCE PROGRAM

##### WAC

173-309-010 through 173-309-090 Repealed.

##### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

- 173-309-010 Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-309-010, filed 9/4/90, effective 10/5/90. Statutory Authority: RCW 70.105B.220(4). 88-17-009 (Order 88-61), § 173-309-010, filed 8/5/88.] Repealed by 97-18-046 (Order 97-18), filed 8/28/97, effective 9/28/97.
- 173-309-020 Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-309-020, filed 9/4/90, effective 10/5/90. Statutory Authority: RCW 70.105B.220(4). 88-17-009 (Order 88-61), § 173-309-020, filed 8/5/88.] Repealed by 97-18-046 (Order 97-18), filed 8/28/97, effective 9/28/97.
- 173-309-030 Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-309-030, filed 9/4/90, effective 10/5/90. Statutory Authority: RCW 70.105B.220(4). 88-17-009 (Order 88-61), § 173-309-030, filed 8/5/88.] Repealed by 97-18-046 (Order 97-18), filed 8/28/97, effective 9/28/97.
- 173-309-040 Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-309-040, filed 9/4/90, effective 10/5/90. Statutory Authority: RCW 70.105B.220(4). 88-17-009 (Order 88-61), § 173-309-040, filed 8/5/88.] Repealed by 97-18-046 (Order 97-18), filed 8/28/97, effective 9/28/97.
- 173-309-050 Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-309-050, filed 9/4/90, effective 10/5/90. Statutory Authority: RCW 70.105B.220(4). 88-17-009 (Order 88-61), § 173-309-050, filed 8/5/88.] Repealed by 97-18-046 (Order 97-18), filed 8/28/97, effective 9/28/97.
- 173-309-060 Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-309-060, filed 9/4/90, effective 10/5/90. Statutory Authority: RCW 70.105B.220(4). 88-17-009 (Order 88-61), § 173-309-060, filed 8/5/88.] Repealed by 97-18-046 (Order 97-18), filed 8/28/97, effective 9/28/97.
- 173-309-070 Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-309-070, filed 9/4/90, effective 10/5/90. Statutory Authority: RCW 70.105B.220(4). 88-17-009 (Order 88-61), § 173-309-070, filed 8/5/88.] Repealed by 97-18-046 (Order 97-18), filed 8/28/97, effective 9/28/97.
- 173-309-080 Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-309-080, filed 9/4/90, effective 10/5/90. Statutory Authority: RCW 70.105B.220(4). 88-17-009 (Order 88-61), § 173-309-080, filed 8/5/88.] Repealed by 97-18-046 (Order 97-18), filed 8/28/97, effective 9/28/97.
- 173-309-090 Reserved. [Statutory Authority: RCW 43.21A.080 and chapter 70.105D RCW. 90-18-064 (Order 90-17), § 173-309-090, filed 9/4/90, effective 10/5/90. Statutory Authority: RCW 70.105B.220(4). 88-17-009 (Order 88-61), § 173-309-090, filed 8/5/88.] Repealed by 97-18-046 (Order 97-18), filed 8/28/97, effective 9/28/97.

**WAC 173-309-010 through 173-309-090 Repealed.**  
See Disposition Table at beginning of this chapter.

### Chapter 173-311 WAC MODERATE RISK WASTE GRANTS

##### WAC

173-311-010 through 173-311-050 Repealed.

##### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

- 173-311-010 Purpose and authority. [Statutory Authority: RCW 43.21A.080, chapter 70.105D RCW and 1990 c 114 § 19. 90-18-066 (Order 90-22), § 173-311-010, filed 9/4/90, effective 10/5/90.] Repealed by 97-18-048 (Order 97-19), filed 8/28/97, effective 9/28/97.
- 173-311-020 Definitions. [Statutory Authority: RCW 43.21A.080, chapter 70.105D RCW and 1990 c 114 § 19. 90-18-066 (Order 90-22), § 173-311-020, filed 9/4/90, effective 10/5/90.] Repealed by 97-18-048 (Order 97-19), filed 8/28/97, effective 9/28/97.
- 173-311-030 Relation to other legislation and administrative rules. [Statutory Authority: RCW 43.21A.080, chapter 70.105D RCW and 1990 c 114 § 19. 90-18-066 (Order 90-22), § 173-311-030, filed 9/4/90, effective 10/5/90.] Repealed by 97-18-048 (Order 97-19), filed 8/28/97, effective 9/28/97.
- 173-311-040 General. [Statutory Authority: RCW 43.21A.080, chapter 70.105D RCW and 1990 c 114 § 19. 90-18-066 (Order 90-22), § 173-311-040, filed 9/4/90, effective 10/5/90.] Repealed by 97-18-048 (Order 97-19), filed 8/28/97, effective 9/28/97.
- 173-311-050 Moderate risk waste grants. [Statutory Authority: RCW 43.21A.080, chapter 70.105D RCW and 1990 c 114 § 19. 90-18-066 (Order 90-22), § 173-311-050, filed 9/4/90, effective 10/5/90.] Repealed by 97-18-048 (Order 97-19), filed 8/28/97, effective 9/28/97.

**WAC 173-311-010 through 173-311-050 Repealed.**  
See Disposition Table at beginning of this chapter.

### Chapter 173-315 WAC MODEL TOXICS CONTROL ACT—LOCAL TOXICS CONTROL ACCOUNT—INTERIM FINANCIAL ASSISTANCE PROGRAM

##### WAC

173-315-010 through 173-315-070 Repealed.

##### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

- 173-315-010 Purpose and authority. [Statutory Authority: Chapter 70.105D RCW. 90-10-058 (Order 89-42), § 173-315-010, filed 5/1/90, effective 6/1/90. Statutory Authority: 1989 c 2. 89-17-072 (Order 89-11), § 173-315-010, filed 8/17/89, effective 9/17/89.] Repealed by 97-18-043 (Order 97-20), filed 8/28/97, effective 9/28/97.
- 173-315-020 Definitions. [Statutory Authority: 1989 c 2. 89-17-072 (Order 89-11), § 173-315-020, filed 8/17/89, effective 9/17/89.] Repealed by 97-18-043 (Order 97-20), filed 8/28/97, effective 9/28/97.
- 173-315-030 Relation to other legislation and administrative rules. [Statutory Authority: 1989 c 2. 89-17-072 (Order 89-11), § 173-315-030, filed 8/17/89, effective 9/17/89.] Repealed by 97-18-043 (Order 97-20), filed 8/28/97, effective 9/28/97.
- 173-315-040 General. [Statutory Authority: Chapter 70.105D RCW. 90-10-058 (Order 89-42), § 173-315-040, filed 5/1/90, effective 6/1/90. Statutory Authority: 1989 c 2. 89-17-072 (Order 89-11), § 173-315-040, filed 8/17/89, effective 9/17/89.] Repealed by 97-18-043 (Order 97-20), filed 8/28/97, effective 9/28/97.

- 173-315-050 Reserved. [Statutory Authority: Chapter 70.105D RCW. 90-10-058 (Order 89-42), § 173-315-050, filed 5/1/90, effective 6/1/90. Statutory Authority: 1989 c 2. 89-17-072 (Order 89-11), § 173-315-050, filed 8/17/89, effective 9/17/89.] Repealed by 97-18-043 (Order 97-20), filed 8/28/97, effective 9/28/97.
- 173-315-060 Hazardous waste planning and program grants. [Statutory Authority: RCW 43.21A.080, chapter 70.105D RCW and 1990 c 114 § 19. 90-18-066 (Order 90-22), § 173-315-060, filed 9/4/90, effective 10/5/90. Statutory Authority: 1989 c 2. 89-17-072 (Order 89-11), § 173-315-060, filed 8/17/89, effective 9/17/89.] Repealed by 97-18-043 (Order 97-20), filed 8/28/97, effective 9/28/97.
- 173-315-070 Solid waste planning and program grants. [Statutory Authority: 1989 c 2. 89-17-072 (Order 89-11), § 173-315-070, filed 8/17/89, effective 9/17/89.] Repealed by 97-18-043 (Order 97-20), filed 8/28/97, effective 9/28/97.

**WAC 173-315-010 through 173-315-070 Repealed.**  
See Disposition Table at beginning of this chapter.

**Chapter 173-318 WAC**  
**PHASE ONE—WASTE REDUCTION AND**  
**RECYCLING GRANTS**

**WAC**

- 173-318-010 through 173-318-080 Repealed.

**DISPOSITION OF SECTIONS FORMERLY**  
**CODIFIED IN THIS CHAPTER**

- 173-318-010 Purpose and authority. [Statutory Authority: Chapters 43.83A and 43.99F RCW. 89-18-070 (Order 89-29), § 173-318-010, filed 9/5/89, effective 10/6/89.] Repealed by 97-18-044 (Order 97-22), filed 8/28/97, effective 9/28/97.
- 173-318-020 Relation to other legislation and administrative rules. [Statutory Authority: Chapters 43.83A and 43.99F RCW. 89-18-070 (Order 89-29), § 173-318-020, filed 9/5/89, effective 10/6/89.] Repealed by 97-18-044 (Order 97-22), filed 8/28/97, effective 9/28/97.
- 173-318-030 Definitions. [Statutory Authority: Chapters 43.83A and 43.99F RCW. 89-18-070 (Order 89-29), § 173-318-030, filed 9/5/89, effective 10/6/89.] Repealed by 97-18-044 (Order 97-22), filed 8/28/97, effective 9/28/97.
- 173-318-040 Funding. [Statutory Authority: Chapters 43.83A and 43.99F RCW. 89-18-070 (Order 89-29), § 173-318-040, filed 9/5/89, effective 10/6/89.] Repealed by 97-18-044 (Order 97-22), filed 8/28/97, effective 9/28/97.
- 173-318-050 Procedures. [Statutory Authority: Chapters 43.83A and 43.99F RCW. 89-18-070 (Order 89-29), § 173-318-050, filed 9/5/89, effective 10/6/89.] Repealed by 97-18-044 (Order 97-22), filed 8/28/97, effective 9/28/97.
- 173-318-060 Eligibility and grantee match requirements. [Statutory Authority: Chapters 43.83A and 43.99F RCW. 89-18-070 (Order 89-29), § 173-318-060, filed 9/5/89, effective 10/6/89.] Repealed by 97-18-044 (Order 97-22), filed 8/28/97, effective 9/28/97.
- 173-318-070 Waste reduction/recycling best management practices study demonstration project grants. [Statutory Authority: Chapters 43.83A and 43.99F RCW. 89-18-070 (Order 89-29), § 173-318-070, filed 9/5/89, effective 10/6/89.] Repealed by 97-18-044 (Order 97-22), filed 8/28/97, effective 9/28/97.
- 173-318-080 Preimplementation program design grants for waste reduction/recycling projects. [Statutory Authority: Chapters 43.83A and 43.99F RCW. 89-18-070 (Order 89-29), § 173-318-080, filed 9/5/89, effective 10/6/89.] Repealed by 97-18-044 (Order 97-22), filed 8/28/97, effective 9/28/97.

**WAC 173-318-010 through 173-318-080 Repealed.**  
See Disposition Table at beginning of this chapter.

**Chapter 173-319 WAC**  
**COMPREHENSIVE WASTE REDUCTION/**  
**RECYCLING GRANTS PROGRAM**

**WAC**

- 173-319-010 through 173-319-060 Repealed.

**DISPOSITION OF SECTIONS FORMERLY**  
**CODIFIED IN THIS CHAPTER**

- 173-319-010 Purpose and authority. [Statutory Authority: RCW 43.21A.080. 90-22-084 (Order 90-39), § 173-319-010, filed 11/6/90, effective 12/7/90.] Repealed by 97-18-045 (Order 97-23), filed 8/28/97, effective 9/28/97.
- 173-319-020 Relation to other legislation and administrative rules. [Statutory Authority: RCW 43.21A.080. 90-22-084 (Order 90-39), § 173-319-020, filed 11/6/90, effective 12/7/90.] Repealed by 97-18-045 (Order 97-23), filed 8/28/97, effective 9/28/97.
- 173-319-030 Definitions. [Statutory Authority: RCW 43.21A.080. 90-22-084 (Order 90-39), § 173-319-030, filed 11/6/90, effective 12/7/90.] Repealed by 97-18-045 (Order 97-23), filed 8/28/97, effective 9/28/97.
- 173-319-040 General. [Statutory Authority: RCW 43.21A.080. 90-22-084 (Order 90-39), § 173-319-040, filed 11/6/90, effective 12/7/90.] Repealed by 97-18-045 (Order 97-23), filed 8/28/97, effective 9/28/97.
- 173-319-050 Compost study grants. [Statutory Authority: RCW 43.21A.080. 90-22-084 (Order 90-39), § 173-319-050, filed 11/6/90, effective 12/7/90.] Repealed by 97-18-045 (Order 97-23), filed 8/28/97, effective 9/28/97.
- 173-319-060 Waste reduction and recycling public information and education grants. [Statutory Authority: RCW 43.21A.080. 90-22-084 (Order 90-39), § 173-319-060, filed 11/6/90, effective 12/7/90.] Repealed by 97-18-045 (Order 97-23), filed 8/28/97, effective 9/28/97.

**WAC 173-319-010 through 173-319-060 Repealed.**  
See Disposition Table at beginning of this chapter.

**Chapter 173-400 WAC**  
**GENERAL REGULATIONS FOR AIR POLLUTION**  
**SOURCES**

**WAC**

- 173-400-030 Definitions.
- 173-400-110 New source review (NSR).

**WAC 173-400-030 Definitions.** Except as provided elsewhere in this chapter, the following definitions apply throughout the chapter:

(1) "Actual emissions" means the actual rate of emissions of a pollutant from an emission unit, as determined in accordance with (a) through (c) of this subsection.

(a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a two-year period which precedes the particular date and which is representative of normal source operation. Ecology or an authority shall allow the use of a different time period upon a determination that it is more representative of normal source operation. Actual emissions shall be calculated using

the emissions unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period.

(b) Ecology or an authority may presume that source-specific allowable emissions for the unit are equivalent to the actual emissions of the emissions unit.

(c) For any emissions unit which has not begun normal operations on the particular date, actual emissions shall equal the potential to emit of the emissions unit on that date.

(2) "Adverse impact on visibility" means visibility impairment which interferes with the management, protection, preservation, or enjoyment of the visitor's visual experience of the Federal Class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency, and time of visibility impairment, and how these factors correlate with (a) times of visitor use of the Federal Class I area, and (b) the frequency and timing of natural conditions that reduce visibility. This term does not include effects on integral vistas.

(3) "Air contaminant" means dust, fumes, mist, smoke, other particulate matter, vapor, gas, odorous substance, or any combination thereof. "Air pollutant" means the same as "air contaminant."

(4) "Air pollution" means the presence in the outdoor atmosphere of one or more air contaminants in sufficient quantities, and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property. For the purposes of this chapter, air pollution shall not include air contaminants emitted in compliance with chapter 17.21 RCW, the Washington Pesticide Application Act, which regulates the application and control of the use of various pesticides.

(5) "Allowable emissions" means the emission rate of a stationary source calculated using the maximum rated capacity of the stationary source (unless the stationary source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

(a) The applicable standards as set forth in 40 CFR Part 60 or 61;

(b) Any applicable state implementation plan emissions limitation including those with a future compliance date; or

(c) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

(6) "Ambient air" means the surrounding outside air.

(7) "Ambient air quality standard" means an established concentration, exposure time, and frequency of occurrence of air contaminant(s) in the ambient air which shall not be exceeded.

(8) "Authority" means any air pollution control agency whose jurisdictional boundaries are coextensive with the boundaries of one or more counties.

(9) "Begin actual construction" means, in general, initiation of physical on-site construction activities on an emission unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipe work and construction of permanent storage structures. With respect to a change in method of operations, this term refers

to those on-site activities other than preparatory activities which mark the initiation of the change.

(10) "Best available control technology (BACT)" means an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under chapter 70.94 RCW emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such pollutant. In no event shall application of the "best available control technology" result in emissions of any pollutants which will exceed the emissions allowed by any applicable standard under 40 CFR Part 60 and Part 61, as they exist on March 1, 1996, or their later enactments as adopted by reference by the director by rule. Emissions from any source utilizing clean fuels, or any other means, to comply with this paragraph shall not be allowed to increase above levels that would have been required under the definition of BACT in the Federal Clean Air Act as it existed prior to enactment of the Clean Air Act Amendments of 1990.

(11) "Best available retrofit technology (BART)" means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant which is emitted by an existing stationary facility. The emission limitation must be established, on a case-by-case basis, taking into consideration the technology available, the costs of compliance, the energy and nonair quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

(12) "Bubble" means a set of emission limits which allows an increase in emissions from a given emissions unit(s) in exchange for a decrease in emissions from another emissions unit(s), pursuant to RCW 70.94.155 and WAC 173-400-120.

(13) "Capacity factor" means the ratio of the average load on equipment or a machine for the period of time considered, to the manufacturer's capacity rating of the machine or equipment.

(14) "Class I area" means any area designated pursuant to §§ 162 or 164 of the Federal Clean Air Act as a Class I area. The following areas are the Class I areas in Washington state:

- Alpine Lakes Wilderness;
- Glacier Peak Wilderness;
- Goat Rocks Wilderness;
- Mount Adams Wilderness;
- Mount Rainier National Park;
- North Cascades National Park;
- Olympic National Park;
- Pasayten Wilderness;
- Spokane Indian Reservation.

(15) "Combustion and incineration sources" means units using combustion for waste disposal, steam production,

chemical recovery or other process requirements; but excludes open burning.

(16) "Commenced construction" means that the owner or operator has all the necessary preconstruction approvals or permits and either has:

(a) Begun, or caused to begin, a continuous program of actual on-site construction of the source, to be completed within a reasonable time; or

(b) Entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of actual construction of the source to be completed within a reasonable time.

(17) "Concealment" means any action taken to reduce the observed or measured concentrations of a pollutant in a gaseous effluent while, in fact, not reducing the total amount of pollutant discharged.

(18) "Director" means director of the Washington state department of ecology or duly authorized representative.

(19) "Dispersion technique" means a method which attempts to affect the concentration of a pollutant in the ambient air other than by the use of pollution abatement equipment or integral process pollution controls.

(20) "Ecology" means the Washington state department of ecology.

(21) "Emission" means a release of air contaminants into the ambient air.

(22) "Emission reduction credit (ERC)" means a credit granted pursuant to WAC 173-400-131. This is a voluntary reduction in emissions.

(23) "Emission standard" and "emission limitation" means a requirement established under the FCAA or chapter 70.94 RCW which limits the quantity, rate, or concentration of emissions of air contaminants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction and any design, equipment work practice, or operational standard promulgated under the FCAA or chapter 70.94 RCW.

(24) "Emissions unit" means any part of a stationary source or source which emits or would have the potential to emit any pollutant subject to regulation under the FCAA, chapter 70.94 or 70.98 RCW.

(25) "Excess emissions" means emissions of an air pollutant in excess of any applicable emission standard.

(26) "Excess stack height" means that portion of a stack which exceeds the greater of sixty-five meters or the calculated stack height described in WAC 173-400-200(2).

(27) "Existing stationary facility" means a stationary source of air pollutants which has the potential to emit two hundred fifty tons per year or more of any air pollutant. In determining potential to emit, fugitive emissions, to the extent quantifiable, must be counted. For purposes of determining whether a stationary source is an existing stationary facility the term "building, structure, facility, or installation" means all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant-emitting activities shall be considered as part of the same major group (i.e., which have the same two

digit code) as described in the *Standard Industrial Classification Manual, 1972*, as amended by the 1977 Supplement.

(28) "Federal Clean Air Act (FCAA)" means the Federal Clean Air Act, also known as Public Law 88-206, 77 Stat. 392, December 17, 1963, 42 U.S.C. 7401 et seq., as last amended by the Clean Air Act Amendments of 1990, P.L. 101-549, November 15, 1990.

(29) "Federal land manager" means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.

(30) "Fossil fuel-fired steam generator" means a device, furnace, or boiler used in the process of burning fossil fuel for the primary purpose of producing steam by heat transfer.

(31) "Fugitive dust" means a particulate emission made airborne by forces of wind, man's activity, or both. Unpaved roads, construction sites, and tilled land are examples of areas that originate fugitive dust. Fugitive dust is a type of fugitive emission.

(32) "Fugitive emissions" means emissions which do not pass and which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(33) "General process unit" means an emissions unit using a procedure or a combination of procedures for the purpose of causing a change in material by either chemical or physical means, excluding combustion.

(34) "Good engineering practice (GEP)" refers to a calculated stack height based on the equation specified in WAC 173-400-200 (2)(a)(ii).

(35) "Incinerator" means a furnace used primarily for the thermal destruction of waste.

(36) "In operation" means engaged in activity related to the primary design function of the source.

(37) "Integral vista" means a view perceived from within a mandatory Class I federal area of a specific landmark or panorama located outside the boundary of the mandatory Class I federal area.

(38) "Lowest achievable emission rate (LAER)" means for any source that rate of emissions which reflects the more stringent of:

(a) The most stringent emission limitation which is contained in the implementation plan of any state for such class or category of source, unless the owner or operator of the proposed new or modified source demonstrates that such limitations are not achievable; or

(b) The most stringent emission limitation which is achieved in practice by such class or category of source.

In no event shall the application of this term permit a proposed new or modified source to emit any pollutant in excess of the amount allowable under applicable new source performance standards.

(39) "Mandatory Class I federal area" means any area defined in Section 162(a) of the FCAA. The mandatory Class I federal areas in Washington state are as follows:

- Alpine Lakes Wilderness;
- Glacier Peak Wilderness;
- Goat Rocks Wilderness;
- Mount Adams Wilderness;
- Mount Rainier National Park;
- North Cascades National Park;
- Olympic National Park;
- Pasayten Wilderness.



(40) "Major modification" means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the FCAA. Any net emissions increase that is considered significant for volatile organic compounds or nitrogen oxides shall be considered significant for ozone. A physical change or change in the method of operation shall not include:

(a) Routine maintenance, repair, and replacement;  
 (b) Use of an alternative fuel or raw material by reason of an order under Sections 2(a) and (b) of the Energy Supply and Environmental Supply Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;

(c) Use of an alternative fuel by reason of an order or rule under section 125 of the FCAA, 42 U.S.C. 7425;

(d) Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;

(e) Use of an alternative fuel or raw material by a stationary source which:

(i) The stationary source was capable of accommodating before December 21, 1976, unless such change would be prohibited under any federally enforceable permit condition which was established after December 12, 1976, in a prevention of significant deterioration permit or notice of construction approval; or

(ii) The stationary source is approved to use under any federally-enforceable notice of construction approval or a PSD permit issued by the environmental protection agency;

(f) An increase in the hours of operation or in the production rate, unless such change is prohibited under any federally enforceable permit condition which was established after December 21, 1976, in a prevention of significant deterioration permit or a notice of construction approval;

(g) Any change in ownership at a stationary source.

(41) "Major stationary source" means:

(a) Any stationary source which:

(i) Emits or has the potential to emit one hundred tons per year or more of any air contaminant regulated by the state or Federal Clean Air Acts; or

(ii) Is located in a "marginal" or "moderate" ozone nonattainment area and which emits or has the potential to emit one hundred tons per year or more of volatile organic compounds or oxides of nitrogen.

(b) Any stationary source (or group of stationary sources) which:

(i) Is located in a "serious" carbon monoxide nonattainment area where stationary sources contribute significantly to carbon monoxide levels and which emits or has the potential to emit fifty tons per year or more of carbon monoxide; or

(ii) Is located in a "serious" particulate matter (PM<sub>10</sub>) nonattainment area and which emits or has the potential to emit seventy tons per year or more of PM<sub>10</sub> emissions.

(c) Any physical change that would occur at a stationary source not qualifying under (a) or (b) of this subsection as a major stationary source, if the change would constitute a major stationary source by itself;

(d) A major stationary source that is major for VOCs or NOx shall be considered major for ozone;

(e) The fugitive emissions of a stationary source shall not be included in determining whether it is a major stationary source, unless the stationary source belongs to one of the following categories of stationary sources or the source is a major stationary source due to (b) of this subsection:

(i) Coal cleaning plants (with thermal dryers);

(ii) Kraft pulp mills;

(iii) Portland cements plants;

(iv) Primary zinc smelters;

(v) Iron and steel mills;

(vi) Primary aluminum ore reduction plants;

(vii) Primary copper smelters;

(viii) Municipal incinerators capable of charging more than two hundred fifty tons of refuse per day;

(ix) Hydrofluoric, sulfuric, or nitric acid plants;

(x) Petroleum refineries;

(xi) Lime plants;

(xii) Phosphate rock processing plants;

(xiii) Coke oven batteries;

(xiv) Sulfur recovery plants;

(xv) Carbon black plants (furnace process);

(xvi) Primary lead smelters;

(xvii) Fuel conversion plants;

(xviii) Sintering plants;

(xix) Secondary metal production plants;

(xx) Chemical process plants;

(xxi) Fossil-fuel boilers (or combination thereof) totaling more than two hundred fifty million British thermal units per hour heat input;

(xxii) Petroleum storage and transfer units with a total storage capacity exceeding three hundred thousand barrels;

(xxiii) Taconite ore processing plants;

(xxiv) Glass fiber processing plants;

(xxv) Charcoal production plants;

(xxvi) Fossil fuel-fired steam electric plants of more than two hundred fifty million British thermal units per hour heat input; and

(xxvii) Any other stationary source category which, as of August 7, 1980, was being regulated under sections 111 or 112 of the Federal Clean Air Act.

(f) For purposes of determining whether a stationary source is a major stationary source, the term "building, structure, facility, or installation" means all the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same major group (i.e., which have the same two digit code) as described in the *Standard Industrial Classification Manual, 1972*, as amended by the 1977 Supplement.

(42) "Masking" means the mixing of a chemically nonreactive control agent with a malodorous gaseous effluent to change the perceived odor.

(43) "Materials handling" means the handling, transporting, loading, unloading, storage, and transfer of materials with no significant chemical or physical alteration.

(44) "Modification" means any physical change in, or change in the method of operation of, a stationary source that increases the amount of any air contaminant emitted by such source or that results in the emissions of any air

contaminant not previously emitted. The term modification shall be construed consistent with the definitions of modification in Section 7411, Title 42, United States Code, and with rules implementing that section.

(45) "National Emission Standards for Hazardous Air Pollutants (NESHAPS)" means the federal regulations set forth in 40 CFR Parts 61 and 63.

(46) "Natural conditions" means naturally occurring phenomena that reduce visibility as measured in terms of visual range, contrast, or coloration.

(47) "Net emissions increase" means:

(a) The amount by which the sum of the following exceeds zero:

(i) Any increase in actual emissions from a particular change or change in method of operation at a source; and

(ii) Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

(b) An increase or decrease in actual emissions is contemporaneous with the increase from the particular change only if it occurs between the date ten years before construction on the particular change commences and the date that the increase from the particular change occurs.

(c) An increase or decrease in actual emissions is creditable only if:

(i) It occurred no more than one year prior to the date of submittal of a complete notice of construction application for the particular change, or it has been documented by an emission reduction credit, in which case the credit shall expire ten years after the date of original issue of the ERC. Any emissions increases occurring between the date of issuance of the ERC and the date when a particular change becomes operational shall be counted against the ERC.

(ii) Ecology or the authority has not relied on it in issuing any permit or order of approval for the source under regulations approved pursuant to 40 CFR 51 Subpart I or the EPA has not relied on it in issuing a PSD permit pursuant to 40 CFR 52.21, which order or permit is in effect when the increase in actual emissions from the particular change occurs.

(d) An increase in actual emissions is creditable only to the extent that the new level of actual emissions exceeds the old level.

(e) A decrease in actual emissions is creditable only to the extent that:

(i) The old level of actual emissions or the old level of allowable emissions, whichever is lower, exceeds the new level of actual emissions;

(ii) It is federally enforceable at and after the time that actual construction on the particular change begins;

(iii) It has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change; and

(iv) Ecology or the authority has not relied on it in issuing any permit or order of approval under regulations approved pursuant to 40 CFR 51 Subpart I, the EPA has not relied on it in issuing a PSD permit pursuant to 40 CFR 52.21, or ecology or the authority has not relied on it in demonstrating attainment or reasonable further progress.

(f) An increase that results from a physical change at a source occurs when the emission unit on which construction

occurred becomes operational and begins to emit a particular pollutant. Any replacement unit that requires a shutdown becomes operational only after a reasonable shutdown period, not to exceed one hundred eighty days.

(48) "New source" means:

(a) The construction or modification of a stationary source that increases the amount of any air contaminant emitted by such source or that results in the emission of any air contaminant not previously emitted; and

(b) Any other project that constitutes a new source under the Federal Clean Air Act.

(49) "New source performance standards (NSPS)" means the federal regulations set forth in 40 CFR Part 60.

(50) "Nonattainment area" means a clearly delineated geographic area which has been designated by EPA promulgation as exceeding a national ambient air quality standard or standards for one or more of the criteria pollutants.

(51) "Notice of construction application" means a written application to permit construction of a new source, modification of an existing stationary source or replacement or substantial alteration of control technology at an existing stationary source.

(52) "Opacity" means the degree to which an object seen through a plume is obscured, stated as a percentage.

(53) "Open burning" means the combustion of material in an open fire or in an outdoor container, without providing for the control of combustion or the control of the emissions from the combustion. Wood waste disposal in wigwam burners is not considered open burning.

(54) "Order" means any order issued by ecology or a local air authority pursuant to chapter 70.94 RCW, including, but not limited to RCW 70.94.332, 70.94.152, 70.94.153, and 70.94.141(3), and includes, where used in the generic sense, the terms order, corrective action order, order of approval, and regulatory order.

(55) "Order of approval" or "approval order" means a regulatory order issued by ecology or the authority to approve the notice of construction application for a proposed new source or modification, or the replacement or substantial alteration of control technology at an existing stationary source.

(56) "Particulate matter" or "particulates" means any airborne finely divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers.

(57) "Particulate matter emissions" means all finely divided solid or liquid material, other than uncombined water, emitted to the ambient air as measured by applicable reference methods, or an equivalent or alternative method specified in 40 CFR Part 60 or by a test method specified in the Washington state implementation plan.

(58) "Parts per million (ppm)" means parts of a contaminant per million parts of gas, by volume, exclusive of water or particulates.

(59) "Person" means an individual, firm, public or private corporation, association, partnership, political subdivision, municipality, or government agency.

(60) "PM-10" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by a reference method based on 40 CFR Part 50 Appendix J and designated in accordance with 40

CFR Part 53 or by an equivalent method designated in accordance with 40 CFR Part 53.

(61) "PM-10 emissions" means finely divided solid or liquid material, including condensable particulate matter, with an aerodynamic diameter less than or equal to a nominal 10 micrometers emitted to the ambient air as measured by an applicable reference method, or an equivalent or alternate method, specified in Appendix M of 40 CFR Part 51 or by a test method specified in the Washington state implementation plan.

(62) "Potential to emit" means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

(63) "Prevention of significant deterioration (PSD)" means the program set forth in WAC 173-400-141.

(64) "Projected width" means that dimension of a structure determined from the frontal area of the structure, projected onto a plane perpendicular to a line between the center of the stack and the center of the building.

(65) "Reasonably attributable" means attributable by visual observation or any other technique the state deems appropriate.

(66) "Reasonably available control technology (RACT)" means the lowest emission limit that a particular source or source category is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. RACT is determined on a case-by-case basis for an individual source or source category taking into account the impact of the source upon air quality, the availability of additional controls, the emission reduction to be achieved by additional controls, the impact of additional controls on air quality, and the capital and operating costs of the additional controls. RACT requirements for any source or source category shall be adopted only after notice and opportunity for comment are afforded.

(67) "Regulatory order" means an order issued by ecology or an authority to an air contaminant source which applies to that source, any applicable provision of chapter 70.94 RCW, or the rules adopted thereunder, or, for sources regulated by a local air authority, the regulations of that authority.

(68) "Significant" means, in reference to a net emissions increase or the potential of a source to emit any of the following pollutants, a rate of emission equal to or greater than any one of the following rates:

Pollutant	Tons/Year
Carbon monoxide . . . . .	100
Nitrogen oxides . . . . .	40
Sulfur dioxide . . . . .	40
Particulate matter (PM) . . . . .	25
Fine particulate matter (PM <sub>10</sub> ) . . . . .	15
Volatile organic compounds (VOC) . . . . .	40

Lead . . . . .	0.6
Fluorides . . . . .	3
Sulfuric acid mist . . . . .	7
Hydrogen sulfide (H <sub>2</sub> S) . . . . .	10
Total reduced sulfur (including H <sub>2</sub> S) . . . . .	10
Municipal waste combustor organics . . . . .	0.0000035
(measured as total tetra-through octa-chlorinated dibenzo-p-dioxins and dibenzofurans	
Municipal waste combustor metals (measured as PM)	15
Municipal waste combustor acid gases (measured as SO <sub>2</sub> and hydrogen chloride) . . . . .	40

(69) "Significant visibility impairment" means visibility impairment which interferes with the management, protection, preservation, or enjoyment of visitor visual experience of the Class I area. The determination must be made on a case-by-case basis, taking into account the geographic extent, intensity, duration, frequency, and time of the visibility impairment, and how these factors correlate with the time of visitor use of the Class I area and frequency and timing of natural conditions that reduce visibility.

(70) "Source" means all of the emissions unit(s) including quantifiable fugitive emissions, that are located on one or more contiguous or adjacent properties, and are under the control of the same person or persons under common control, whose activities are ancillary to the production of a single product or functionally related groups of products. Activities shall be considered ancillary to the production of a single product or functionally related group of products if they belong to the same major group (i.e., which have the same two digit code) as described in the *Standard Industrial Classification Manual, 1972*, as amended by the 1977 Supplement.

(71) "Source category" means all sources of the same type or classification.

(72) "Stack" means any point in a source designed to emit solids, liquids, or gases into the air, including a pipe or duct.

(73) "Stack height" means the height of an emission point measured from the ground-level elevation at the base of the stack.

(74) "Standard conditions" means a temperature of 20°C (68°F) and a pressure of 760 mm (29.92 inches) of mercury.

(75) "Stationary source" means any building, structure, facility, or installation which emits or may emit any contaminant. This term does not include emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in Section 216 of the FCAA.

(76) "Sulfuric acid plant" means any facility producing sulfuric acid by the contact process by burning elemental sulfur, alkylation acid, hydrogen sulfide, or acid sludge.

(77) "Synthetic minor" means any source whose potential to emit has been limited below applicable thresholds by means of a federally enforceable order, rule, or permit condition.

(78) "Total reduced sulfur (TRS)" means the sum of the sulfur compounds hydrogen sulfide, mercaptans, dimethyl sulfide, dimethyl disulfide, and any other organic sulfides emitted and measured by EPA method 16 or an approved equivalent method and expressed as hydrogen sulfide.

(79) "Total suspended particulate" means particulate matter as measured by the method described in 40 CFR Part 50 Appendix B as in effect on October 17, 1996.

(80) "Toxic air pollutant (TAP)" or "toxic air contaminant" means any Class A or B toxic air pollutant listed in WAC 173-460-150 and 173-460-160. The term toxic air pollutant may include particulate matter and volatile organic compounds if an individual substance or a group of substances within either of these classes is listed in WAC 173-460-150 and/or 173-460-160. The term toxic air pollutant does not include particulate matter and volatile organic compounds as generic classes of compounds.

(81) "United States Environmental Protection Agency (USEPA)" shall be referred to as EPA.

(82) "Visibility impairment" means any perceptible degradation in visibility (visual range, contrast, coloration) not caused by natural conditions.

(83) "Visibility impairment of Class I areas" means visibility impairment within the area and visibility impairment of any formally designated integral vista associated with the area.

(84) "Volatile organic compound (VOC)" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. This includes:

(a) Any such organic compound other than the following, which has been determined to have negligible photochemical reactivity: Methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane (methyl chloroform); 1,1,2-trichloro 1,2,2-trifluoroethane (CFC-113); trichlorofluoromethane (CFC-11); dichlorodifluoromethane (CFC-12); chlorodifluoromethane (HCFC-22); trifluoromethane (HFC-23); 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC-114); chloropentafluoroethane (CFC-115); 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123); 1,1,1,2-tetrafluoroethane (HFC-134a); 1,1-dichloro 1-fluoroethane (HCFC-141b); 1-chloro 1,1-difluoroethane (HCFC-142b); 2-chloro 1,1,1,2-tetrafluoroethane (HCFC-124); pentafluoroethane (HFC-125); 1,1,2,2-tetrafluoroethane (HFC-134); 1,1,1-trifluoroethane (HFC-143a); 1,1-difluoroethane (HFC-152a); perchlorobenzotrifluoride (PCBTF); cyclic, branched, or linear completely methylated siloxanes; acetones perchloroethylene (tetrachloroethylene); and perfluorocarbon compounds which fall into these classes:

(i) Cyclic, branched, or linear completely fluorinated alkanes;

(ii) Cyclic, branched, or linear completely fluorinated ethers with no unsaturations; and

(iii) Sulfur containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

(b) For the purpose of determining compliance with emission limits, VOC will be measured by the appropriate methods in 40 CFR Part 60 Appendix A. Where such a method also measures compounds with negligible photochemical reactivity, these negligibly-reactive compounds may be excluded as VOC if the amount of such compounds is accurately quantified, and such exclusion is approved by ecology or the authority.

(c) As a precondition to excluding these negligibly-reactive compounds as VOC or at any time thereafter, ecology or the authority may require an owner or operator to provide monitoring or testing methods and results demonstrating, to the satisfaction of ecology or the authority, the amount of negligibly-reactive compounds in the source's emissions.

[Statutory Authority: RCW 70.94.152, 98-01-183 (Order 96-01), § 173-400-030, filed 12/23/97, effective 1/23/98. Statutory Authority: Chapter 70.94 RCW, 96-19-054 (Order 94-35), § 173-400-030, filed 9/13/96, effective 10/14/96; 95-07-126 (Order 93-40), § 173-400-030, filed 3/22/95, effective 4/22/95; 93-18-007 (Order 93-03), § 173-400-030, filed 8/20/93, effective 9/20/93; 91-05-064 (Order 90-06), § 173-400-030, filed 2/19/91, effective 3/22/91. Statutory Authority: RCW 70.94.331, 70.94.395 and 70.94.510, 85-06-046 (Order 84-48), § 173-400-030, filed 3/6/85. Statutory Authority: Chapters 43.21A and 70.94 RCW, 83-09-036 (Order DE 83-13), § 173-400-030, filed 4/15/83. Statutory Authority: RCW 70.94.331, 80-11-059 (Order DE 80-14), § 173-400-030, filed 8/20/80. Statutory Authority: RCW 43.21A.080 and 70.94.331, 79-06-012 (Order DE 78-21), § 173-400-030, filed 5/8/79; Order DE 76-38, § 173-400-030, filed 12/21/76. Formerly WAC 18-04-030.]

**WAC 173-400-110 New source review (NSR).** (1) **Applicability.** This section, WAC 173-400-112 and 173-400-113 apply state-wide except where an authority has adopted and is implementing its own new source review regulation and those regulations are incorporated into the state implementation plan.

(2) **Projects subject to NSR.** A notice of construction application must be filed by the owner or operator and an order of approval issued by ecology or an authority prior to the establishment of any new source, except for those sources exempt under subsection (4) or (5) of this section.

For purposes of this section "establishment" shall mean to begin actual construction, as that term is defined in WAC 173-400-030(9), and "new source" shall include any modification to an existing stationary source, as defined in WAC 173-400-030(44). Notwithstanding any other subsection of this section, a notice of construction application must be filed and an order of approval issued by ecology or an authority prior to establishment of any of the following new sources:

(a) Any project that qualifies as construction, reconstruction or modification of an affected facility, within the meaning of 40 CFR Part 60 (New Source Performance Standards) (except Part AAA, Wood stoves);

(b) Any project that qualifies as a new or modified source within the meaning of 40 CFR 61.02 (except for asbestos demolition and renovation projects subject to 40 CFR 61.145);

(c) Any project that qualifies as a new source within the meaning of 40 CFR 63.2 (National Emission Standards for Hazardous Air Pollutants);

(d) Any project that qualifies as a major stationary source, as defined in WAC 173-400-030(41), or a major modification, as defined in WAC 173-400-040(40);

(e) Any project that requires an increase in a plant-wide cap or unit specific emission limit.

(3) New source review of a modification shall be limited to the emission unit or units proposed to be added to an existing source or modified and the air contaminants whose emissions would increase as a result of the modification.

**(4) Emission unit and activity exemptions.**

Except as provided in subsection (2) of this section, establishment of a new emission unit that falls within one of the categories listed below is exempt from new source review. Modification of any emission unit listed below is exempt from new source review, provided that the modified unit continues to fall within one of the listed categories. The installation or modification of a unit exempt under this subsection does not require the filing of a Notice of Construction Application.

**(a) Maintenance/construction:**

- (i) Cleaning and sweeping of streets and paved surfaces;
- (ii) Concrete application, and installation;
- (iii) Dredging wet spoils handling and placement;
- (iv) Paving application and maintenance, excluding asphalt plants;

(v) Plant maintenance and upkeep activities (grounds keeping, general repairs, routine house keeping, routine plant painting, welding, cutting, brazing, soldering, plumbing, retarring roofs, etc.);

(vi) Plumbing installation, plumbing protective coating application and maintenance activities;

(vii) Roofing application;

(viii) Insulation application and maintenance, excluding products for resale;

(ix) Janitorial services and consumer use of janitorial products.

**(b) Storage tanks:**

Note: It can be difficult to determine requirements for storage tanks. Ecology strongly recommends that an owner or operator contact ecology or the authority to determine the exemption status of storage tanks prior to their installation.

(i) Lubricating oil storage tanks except those facilities that are wholesale or retail distributors of lubricating oils;

(ii) Polymer tanks and storage devices and associated pumping and handling equipment, used for solids dewatering and flocculation;

(iii) Storage tanks, reservoirs, pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions;

(iv) Process and white water storage tanks;

(v) Operation, loading and unloading of storage tanks and storage vessels, with lids or other appropriate closure and less than 260 gallon capacity (35 cft);

(vi) Operation, loading and unloading of storage tanks, ≤ 1100 gallon capacity, with lids or other appropriate closure, not for use with materials containing toxic air pollutants, as defined in chapter 173-460 WAC, max. VP 550 mm Hg @21°C;

(vii) Operation, loading and unloading storage of butane, propane, or liquefied petroleum gas with a vessel capacity less than 40,000 gallons;

(viii) Tanks, vessels and pumping equipment, with lids or other appropriate closure for storage or dispensing of aqueous solutions of inorganic salts, bases and acids.

(c) A project with combined aggregate heat inputs of combustion units, ≤ all of the following:

(i) ≤ 500,000 Btu/hr using coal with ≤ 0.5% sulfur or other fuels with ≤ 0.5% sulfur;

(ii) ≤ 500,000 Btu/hr used oil, per the requirements of RCW 70.94.610;

(iii) ≤ 400,000 Btu/hr wood waste or paper;

(iv) < 1,000,000 Btu/hr using kerosene, #1, or #2 fuel oil and with ≤0.05% sulfur;

(v) ≤ 4,000,000 Btu/hr using natural gas, propane, or LPG.

**(d) Material handling:**

(i) Continuous digester chip feeders;

(ii) Grain elevators not licensed as warehouses or dealers by either the Washington state department of agriculture or the U.S. Department of Agriculture;

(iii) Storage and handling of water based lubricants for metal working where organic content of the lubricant is ≤ 10%;

(iv) Equipment used exclusively to pump, load, unload, or store high boiling point organic material in tanks less than one million gallon, material with initial atmospheric boiling point not less than 150°C or vapor pressure not more than 5 mm Hg @21°C, with lids or other appropriate closure.

**(e) Water treatment:**

(i) Septic sewer systems, not including active wastewater treatment facilities;

(ii) NPDES permitted ponds and lagoons used solely for the purpose of settling suspended solids and skimming of oil and grease;

(iii) De-aeration (oxygen scavenging) of water where toxic air pollutants as defined in chapter 173-460 WAC are not emitted;

(iv) Process water filtration system and demineralizer vents;

(v) Sewer manholes, junction boxes, sumps and lift stations associated with wastewater treatment systems;

(vi) Demineralizer tanks;

(vii) Alum tanks;

(viii) Clean water condensate tanks.

**(f) Environmental chambers and laboratory equipment:**

(i) Environmental chambers and humidity chambers not using toxic air pollutant gases, as regulated under chapter 173-460 WAC;

(ii) Gas cabinets using only gases that are not toxic air pollutants regulated under chapter 173-460 WAC;

(iii) Installation or modification of a single laboratory fume hood;

(iv) Laboratory calibration and maintenance equipment.

**(g) Monitoring/quality assurance/testing:**

(i) Equipment and instrumentation used for quality control/assurance or inspection purpose;

(ii) Hydraulic and hydrostatic testing equipment;

(iii) Sample gathering, preparation and management;

(iv) Vents from continuous emission monitors and other analyzers.

**(h) Miscellaneous:**

(i) Single-family residences and duplexes;

(ii) Plastic pipe welding;

(iii) Primary agricultural production activities including soil preparation, planting, fertilizing, weed and pest control, and harvesting;

(iv) Comfort air conditioning;

(v) Flares used to indicate danger to the public;

(vi) Natural and forced air vents and stacks for bathroom/toilet activities;

(vii) Personal care activities;

- (viii) Recreational fireplaces including the use of barbecues, campfires, and ceremonial fires;
- (ix) Tobacco smoking rooms and areas;
- (x) Noncommercial smokehouses;
- (xi) Blacksmith forges for single forges;
- (xii) Vehicle maintenance activities, not including vehicle surface coating;
- (xiii) Vehicle or equipment washing (see (c) of this subsection for threshold for boilers);
- (xiv) Wax application;
- (xv) Oxygen, nitrogen, or rare gas extraction and liquefaction equipment not including internal and external combustion equipment;
- (xvi) Ozone generators and ozonation equipment;
- (xvii) Solar simulators;
- (xviii) Ultraviolet curing processes, to the extent that toxic air pollutant gases as defined in chapter 173-460 WAC are not emitted;
- (xix) Electrical circuit breakers, transformers, or switching equipment installation or operation;
- (xx) Pulse capacitors;
- (xxi) Pneumatically operated equipment, including tools and hand held applicator equipment for hot melt adhesives;
- (xxii) Fire suppression equipment;
- (xxiii) Recovery boiler blow-down tank;
- (xxiv) Screw press vents;
- (xxv) Drop hammers or hydraulic presses for forging or metal working;
- (xxvi) Production of foundry sand molds, unheated and using binders less than 0.25% free phenol by sand weight;
- (xxvii) Kraft lime mud storage tanks and process vessels;
- (xxviii) Lime grits washers, filters and handling;
- (xxix) Lime mud filtrate tanks;
- (xxx) Lime mud water;
- (xxxi) Stock cleaning and pressurized pulp washing down process of the brown stock washer;
- (xxxii) Natural gas pressure regulator vents, excluding venting at oil and gas production facilities and transportation marketing facilities;
- (xxxiii) Nontoxic air pollutant, as defined in chapter 173-460 WAC, solvent cleaners less than 10 square feet air-vapor interface with solvent vapor pressure not more than 30 mm Hg @21°C;
- (xxxiv) Surface coating, aqueous solution or suspension containing ≤ 1% (by weight) VOCs, and/or toxic air pollutants as defined in chapter 173-460 WAC;
- (xxxv) Cleaning and stripping activities and equipment using solutions having ≤ 1% VOCs (by weight); on metallic substances, acid solutions are not exempt;
- (xxxvi) Dip coating operations, using materials less than 1% VOCs (by weight) and/or toxic air pollutants as defined in chapter 173-460 WAC.

**(5) Exemptions based on emissions thresholds.**

- (a) Except as provided in subsection (2) of this section and in this subsection:
  - (i) A new emissions unit that has a potential to emit below each of the threshold levels listed in the table contained in (d) of this subsection is exempt from new source review provided that the conditions of (b) of this subsection are met.

(ii) A modification to an existing emissions unit that increases the unit's actual emissions by less than each of the threshold levels listed in the table contained in (d) of this subsection is exempt from new source review provided that the conditions of (b) of this subsection are met.

(b) The owner or operator seeking to exempt a project from new source review under this section shall notify, and upon request, file a brief project summary with ecology or the authority prior to beginning actual construction on the project. If ecology or the authority determine that the project will have more than a de Minimus impact on air quality, ecology or the authority may require the filing of a notice of construction application. Ecology or the authority may require the owner or operator to demonstrate that the emissions increase from the new emissions unit is smaller than all of the thresholds listed below.

(c) The owner/operator may begin actual construction on the project thirty-one days after ecology or the authority receive the summary, unless ecology or the authority notifies the owner/operator within thirty days that the proposed new source requires a notice of construction application.

**(d) Exemption threshold table:**

POLLUTANT	THRESHOLD LEVEL (TONS PER YEAR)
(a) Total Suspended Particulates	1.25
(b) PM10	0.75
(c) Sulfur Oxides	2.0
(d) Nitrogen Oxides	2.0
(e) Volatile Organic Compounds, total	2.0
(f) Carbon Monoxide	5.0
(g) Lead	0.005
(h) Ozone Depleting Substances in Aggregate (the sum of Class I and/or Class II substances as defined in FCAA Title VI and 40 CFR Part 82)	1.0
(i) Toxic Air Pollutants	As specified in chapter 173-460 WAC.

(6) **Completeness determination.** Within thirty days of receipt of a notice of construction application, ecology or the authority shall either notify the applicant in writing that the application is complete or notify the applicant in writing of all additional information necessary, based upon review of information already supplied, to complete the application. For a project subject to PSD review under WAC 173-400-141 a completeness determination includes a determination that the application provides all information required to conduct PSD review.

**(7) Final determination.**

(a) Within sixty days of receipt of a complete application, ecology or the authority shall either issue a final decision on the application or, for those projects subject to public notice, initiate notice and comment procedures under WAC 173-400-171 on a proposed decision, followed as promptly as possible by a final decision.

(b) A person seeking approval to construct or modify a source that requires an operating permit may elect to integrate review of the operating permit application or

amendment required under RCW 70.94.161 and the notice of construction application required by this section. A notice of construction application designated for integrated review shall be processed in accordance with operating permit program procedures and deadlines.

(c) Every final determination on a notice of construction application shall be reviewed and signed prior to issuance by a professional engineer or staff under the direct supervision of a professional engineer in the employ of ecology or the authority.

(d) If the new source is a major stationary source or the change is a major modification, ecology or the authority shall submit any control technology determination included in a final order of approval to the RACT/BACT/LAER clearinghouse maintained by EPA.

(8) **Appeals.** An order of approval, any conditions contained in an order of approval, or the denial of a notice of construction application may be appealed to the pollution control hearings board as provided in chapter 43.21B RCW. Ecology or the authority shall promptly mail copies of each order approving or denying a notice of construction application to the applicant and to any other party who submitted timely comments on the application, along with a notice advising parties of their rights of appeal to the Pollution Control Hearings Board and, where applicable, to the EPA Environmental Appeals Board.

(9) **Portable sources.** For portable sources which locate temporarily at particular sites, the owner(s) or operator(s) shall be allowed to operate at the temporary location without filing a notice of construction application, providing that the owner(s) or operator(s) notifies ecology or the authority of intent to operate at the new location at least thirty days prior to starting the operation, and supplies sufficient information to enable ecology or the authority to determine that the operation will comply with the emission standards for a new source, and will not cause a violation of applicable ambient air quality standards and, if in a nonattainment area, will not interfere with scheduled attainment of ambient standards. The permission to operate shall be for a limited period of time (one year or less) and ecology or the authority may set specific conditions for operation during that period. A temporary source shall be required to comply with all applicable emission standards.

(10) **Construction time limitations.** Approval to construct or modify a stationary source shall become invalid if construction is not commenced within eighteen months after receipt of such approval, if construction is discontinued for a period of eighteen months or more, or if construction is not completed within a reasonable time. Ecology or the authority may extend the eighteen-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project. Each phase must commence construction within eighteen months of the projected and approved commencement date.

(11) **Change of conditions.**

(a) The owner or operator may request, at any time, a change in conditions of an approval order and ecology or the authority may approve such a request provided ecology or the authority finds that:

(i) The change in conditions will not cause the air contaminant source to exceed an emissions standard;

(ii) No ambient air quality standard or PSD increment will be exceeded as a result of the change;

(iii) The change will not adversely impact the ability of ecology or the authority to determine compliance with an emissions standard; and

(iv) The revised order will continue to require BACT, as defined at the time of the original approval, for each new source approved by the order except where the Federal Clean Air Act requires LAER.

(b) Actions taken under this subsection are subject to the public involvement provisions of WAC 173-400-171.

(c) This rule does not prescribe the exact form such requests must take. However, if the request is filed as a notice of construction application, that application shall be acted upon using the timelines found in subsections (6) and (7) of this section. The fee schedule found in WAC 173-400-116 shall also apply to requests filed as notice of construction applications.

[Statutory Authority: RCW 70.94.152, 98-01-183 (Order 96-01), § 173-400-110, filed 12/23/97, effective 1/23/98. Statutory Authority: Chapter 70.94 RCW, 93-18-007 (Order 93-03), § 173-400-110, filed 8/20/93, effective 9/20/93; 91-05-064 (Order 90-06), § 173-400-110, filed 2/19/91, effective 3/22/91. Statutory Authority: Chapters 43.21A and 70.94 RCW, 83-09-036 (Order DE 83-13), § 173-400-110, filed 4/15/83. Statutory Authority: RCW 70.94.331, 70.94.510, and 70.94.785, 81-03-002 (Order DE 80-53), § 173-400-110, filed 1/8/81. Statutory Authority: RCW 70.94.331, 80-11-059 (Order DE 80-14), § 173-400-110, filed 8/20/80. Statutory Authority: RCW 43.21A.080 and 70.94.331, 79-06-012 (Order DE 78-21), § 173-400-110, filed 5/8/79; Order DE 76-38, § 173-400-110, filed 12/21/76. Formerly WAC 18-04-110.]

## Chapter 173-401 WAC OPERATING PERMIT REGULATION

### WAC

173-401-735 Permit appeals.  
173-401-830 Repealed.

### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

173-401-830 Appendix A—Insignificant activities and emission units. [Statutory Authority: Chapter 70.94 RCW, 93-20-075 (Order 91-68), § 173-401-830, filed 10/4/93, effective 11/4/93.] Repealed by 97-21-140 (Order 97-21), filed 10/22/97, effective 11/22/97.

**WAC 173-401-735 Permit appeals.** (1) A decision to issue or to deny a final permit, or the terms or conditions of such a permit, may be appealed to the pollution control hearings board under chapter 43.21B RCW and RCW 70.94.161(9). Any appealable decision or determination shall be identified as such and shall contain a conspicuous notice to the recipient that it may be appealed by filing an appeal with the pollution control hearings board and serving the appeal on the permitting authority within thirty days of receipt, pursuant to RCW 43.21B.310. The provision for appeal in this section is separate from and additional to any federal rights to petition and review under section 505(b) of

the FCAA, including petitions filed pursuant to 40 CFR 70.8(c) and 70.8(d).

(2) Appealing parties. Parties that may file the appeal referenced in subsection (1) of this section include any person who participated in the public participation process pursuant to WAC 173-401-800.

(3) As provided in RCW 34.05.570, a person may seek a writ of mandamus in the event that a permitting authority fails to take final action on an application for a permit, permit renewal, or permit revision within the deadlines specified by WAC 173-401-700 through 173-401-725.

[Statutory Authority: RCW 70.94.161 (2)(a), 97-08-084 (Order 97-01), § 173-401-735, filed 4/2/97, effective 5/3/97. Statutory Authority: Chapter 70.94 RCW, 93-20-075 (Order 91-68), § 173-401-735, filed 10/4/93, effective 11/4/93.]

**WAC 173-401-830 Repealed.** See Disposition Table at beginning of this chapter.

### Chapter 173-430 WAC AGRICULTURAL BURNING

#### WAC

173-430-040 Agricultural burning requirements.

**WAC 173-430-040 Agricultural burning requirements.** (1) Agricultural burning is allowed when it is reasonably necessary to carry out the enterprise. A farmer can show it is reasonably necessary when it meets the criteria of the best management practices and no practical alternative is reasonably available.

(2) All agricultural burning requires a permit.

(a) To qualify for an agricultural burning permit the farmer must be an agricultural operation or government entity with specific agricultural burning needs, such as irrigation districts, drainage districts, and weed control boards.

(b) A farmer must fill out the information requested on a permit application (or the permit) and return it to the permitting authority.

(i) The permitting authority may require the farmer to fill out an application prior to issuing a permit.

(ii) The application must describe the reason for burning and include at least the following information: Name and address of the person or corporation responsible for the burn, the specific location (county; legal description: Range, section, township, block and unit number), the crop type, the type or size of the burn, directions to the burn, specific reason for the burn, the target date for burning, and any additional information required by the permitting authority. Each permitting authority may require additional information on the application.

(iii) All applications must comply with other state or local regulations.

(c) The permitting authority must evaluate the application, if there is one, and approve the permit prior to burning.

(d) Local air agencies (and the department where no local air agency exists) may issue permits for appropriate

agricultural burning activities in nonattainment and urban growth areas.

(3) All agricultural burning permits require a fee. After January 1, 1995, the fee is the greater of:

(a) A minimum fee of twenty-five dollars per year per farm based on burning up to ten acres or equivalent which will be used as follows: Twelve dollars and fifty cents of which goes to the agricultural burning research fund and the remainder will be kept by the permitting authority to cover the costs of administering and enforcing this regulation; or

(b) A variable fee based on the acreage or equivalent of agricultural burning which will be used as follows: Up to one dollar per acre for applied research, twenty-five cents per acre for ecology administration and up to one dollar and twenty-five cents per acre for local permit program administration.

(i) Local permitting program administration. One portion of the fee shall cover the permitting authority's costs of administering and enforcing the program. The permitting authority may set the fee as an amount per farm per year, a set amount per fire, or a set rate no greater than one dollar and twenty-five cents per acre burned. The permitting authority must establish this portion of the fee by an appropriate, public process such as a local rule, ordinance, or resolution. In areas of the state where the department is the permitting authority this portion of the fee shall be one dollar and twenty-five cents per acre burned.

(ii) Ecology administration. Another portion of the fee shall be twenty-five cents per acre burned and cover the state-wide administrative, education, and oversight costs of the department. The amount (if any) by which the annual total, of this portion of the fee, exceeds the annual state-wide administrative, education, and oversight costs shall be deposited in the agricultural burning research fund of the air pollution control account.

(iii) Research fund. A final portion, the agricultural burning applied research portion, of the fee shall be no greater than one dollar per acre burned. The amount assessed may be less than one dollar per acre burned as periodically determined by the Ag task force based on applied research needs, regional needs and the research fund budget. The research portion of the fee assessed shall be fifty cents per acre burned starting in calendar year 1995. The Ag task force may also establish discounted assessment rates based on the use of best management practices.

(c) A farmer must pay the fee prior to receiving a permit. Refunds are allowed for portions not burned provided the adjusted fee after subtracting refunds is no less than twenty-five dollars.

(d) The agricultural burning practices and research task force may set acreage equivalents, for nonfield style agricultural burning practices, based on the amount of emissions relative to typical field burning emissions. Any acreage equivalents, established by rule, shall be used in determining fees. For agricultural burning conducted by irrigation or drainage districts, each mile of ditch (including banks) burned is calculated on an equivalent acreage basis.

(4) All agricultural burning permits must be conditioned to minimize air pollution.

(a) A farmer must comply with the conditions on the agricultural burning permit.



(b) For purposes of protecting public health (not eliminating agricultural burning), if an area exceeds or threatens to exceed unhealthy air pollution levels, the permitting authority may limit the number of acres, on a pro rata basis, or as provided by RCW 70.94.656.

(c) Permits must be conditioned to minimize emissions insofar as practical, including denial of permission to burn during periods of adverse meteorological conditions. Additional requirements for burning of field and turf grasses grown for seed. The department of ecology will proceed with the process to certify alternatives to burning as identified in RCW 70.94.656(3). In addition to the certification process, ecology is also limiting the number of acres allowed to be burned as specified in RCW 70.94.656(4). Without regard to any previous burn permit history, in 1996, each farmer shall be limited to burning the greater of:

(i) Two-thirds of the number of acres the farmer burned under a valid permit issued in 1995; or

(ii) Two-thirds of the number of acres in grass seed production on May 1, 1996. "In production" means planted, growing and under the control of the farmer.

(d) Additional requirements for burning of field and turf grasses grown for seed. Beginning in 1997 and until approved alternatives become available, each farmer shall be limited to burning no more than one-third of the number of acres in grass seed production on May 1, 1996. "In production" means planted, growing and under the control of the farmer.

(e) Exemptions to additional requirements for burning of field and turf grasses grown for seed ((d) of this subsection). A farmer may request an exemption for extraordinary circumstances, such as property where a portion(s) of the field is oddly shaped or where the slope is extremely steep. Under this subsection, relief from the acreage/emissions reduction requirements of (d) of this subsection shall be limited to no more than five percent of the acreage in production on May 1, 1996, and is also subject to the following provisions:

(i) The exemption request must be certified by an agronomic professional;

(ii) The farmer must be able to show full compliance with the emissions reductions in (d) of this subsection for the acreage not exempted; and

(iii) The farmer must be in full compliance with permit requirements for other crops under WAC 173-430-040.

(f) The department of ecology or local air authority may provide for trading of permits using the method described in (f)(i), (ii), (iii), (iv), (v), and (vi) of this subsection. This trading system uses a straight transfer of acres, a transfer requiring mandatory compensation, or a combination of both. If ecology or the local air authority finds that emissions resulting from trading are creating a health impact, as defined by ecology or the local air authority, the trading system, once created, may be dissolved.

(i) Ecology or the local air authority may develop a system that allows the trading of permits by:

(A) Adding a signed transfer line to the written permit that provides for a signature for the current holder of the permit;

(B) Providing a tracking system that identifies the current holder of the permit, that identifies when the permit was last used to allow burning of acreage, and that allows

the name of the holder to be changed if the transfer line is signed by the current holder;

(C) Requiring that the new holder of the permit must turn in the permit with the signed transfer line at least sixty days before the new holder plans to burn; and

(D) Assuring that the permits are used only once in a calendar year.

(ii) By signing the transfer line on the permit the permit holder must indicate that he or she understands that the acres transferred may no longer be burned, that a permit for the acres transferred will not be issued to the signing permit holder in future years, and that the acres being transferred were not already burned during the calendar year during which the transfer takes place.

(iii) Ecology and the local air authorities may add restrictions to the transfer of permits closer to areas with higher population densities.

(iv) Only permits for acreage which has not yet been burned may be transferred or traded. The seller of the permit is responsible for permanently reducing the acreage burned by the amount of acreage transferred from January 1 of the year during which the transaction takes place.

(v) Acreage that is exempted under (e) of this subsection is not eligible for the trading system.

(vi) The authorities are encouraged to work together to use the same system and to allow trading between authority jurisdictions so as to allow the grass seed growers to adjust to the two-thirds overall reduction in acres permitted for burning as easily as possible.

(g) Measurement for emission reduction for grass seed field and turf grass. Ecology will use acres as the basis for determining emission reductions as provided by RCW 70.94.656, until another method(s) is shown to be better and meets with the intent of RCW 70.94.656(4). Ecology will investigate alternate methods, as they become available. If ecology finds that an alternate method is appropriate and meets the criteria, it may certify this method using an administrative order.

(h) Alternate open burning practices for field and turf grass grown for seed. Ecology acknowledges that there may be practices that involve some burning, but which produce emissions quantifiably below those of open field burning. If ecology finds that a practice involves open burning and still substantially reduces emissions below open field burning, ecology may certify the alternate burning practice(s) by administrative order. Any certified practice may be used to satisfy the acreage/emissions reduction requirements of (d) of this subsection provided:

(i) The acreage application of the practice is adjusted to reflect effectiveness in reducing emissions so as to meet or exceed the emissions reduction required by (d) of this subsection; and

(ii) In no case shall the emission reduction requirement for the field and turf grass grown for seed be less than that required in (d) of this subsection.

(5) Other laws. A farmer must obtain any local permits, licenses, or other approvals required by any other laws, regulations, or ordinances. The farmer must also honor other agreements entered into with any federal, state, or local agency.

[Statutory Authority: RCW 70.94.656(4). 97-03-021 (Order 96-05), § 173-430-040, filed 1/7/97, effective 2/7/97. Statutory Authority: RCW

70.94.650. 95-03-083 (Order 94-17), § 173-430-040, filed 1/17/95, effective 2/17/95; 93-14-022 (Order 92-58), § 173-430-040, filed 6/28/93, effective 7/29/93. Statutory Authority: RCW 70.94.331. 90-19-062 (Order 90-10), § 173-430-040, filed 9/17/90, effective 10/18/90; Order DE 77-20, § 173-430-040, filed 11/9/77. Formerly WAC 18-16-040.]

### Chapter 173-491 WAC

#### EMISSION STANDARDS AND CONTROLS FOR SOURCES EMITTING GASOLINE VAPORS

##### WAC

173-491-015	Applicability.
173-491-020	Definitions.
173-491-040	Gasoline vapor control requirements.
173-491-050	Reserved.

**WAC 173-491-015 Applicability.** This chapter shall apply to gasoline marketing operations, including the storage, transport, and transfer of gasoline, including the transfer from storage tanks into transport tanks, and from storage tanks into motor vehicles.

[Statutory Authority: RCW 70.94.165. 98-01-184 (Order 97-07), § 173-491-015, filed 12/23/97, effective 1/23/98. Statutory Authority: RCW 70.94.331. 91-14-101 (Order 90-63), § 173-491-015, filed 7/2/91, effective 8/2/91.]

**WAC 173-491-020 Definitions.** The definitions of terms contained in chapter 173-400 WAC are by this reference incorporated into this chapter. Unless a different meaning is clearly required by context, the following words and phrases, as used in this chapter, shall have the following meanings:

(1) "Bottom loading" means the filling of a tank through a line entering the bottom of the tank.

(2) "Bulk gasoline plant" means a gasoline storage and transfer facility that receives more than ninety percent of its annual gasoline throughput by transport tank, and reloads gasoline into transport tanks.

(3) "Canister capture rate" means canister effectiveness times the percent of light duty vehicles that have onboard vapor recovery systems.

(4) "Canister effectiveness" means the percent of refueling vapors recovered by a representative onboard vapor recovery system.

(5) "Centroid" means the geometric center of a gas pump or a bank of gas pumps or, if a station has more than one bank of pumps, the geometric center of each bank of pumps.

(6) "Certified vapor recovery system" means a vapor recovery system which has been certified by the department of ecology. Only Stage II vapor recovery systems with a single coaxial hose can be certified. The department may certify vapor recovery systems certified by the California Air Resources Board as of the effective date of the regulation.

(7) "Eastern Washington county" means the following counties: Adams, Asotin, Benton, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman, and Yakima.

(8) "Gasoline" means a petroleum distillate which is a liquid at standard conditions and has a true vapor pressure greater than four pounds per square inch absolute at twenty

degrees C, and is used as a fuel for internal combustion engines. Also any liquid sold as a vehicle fuel with a true vapor pressure greater than four pounds per square inch absolute at twenty degrees C shall be considered "gasoline" for purpose of this regulation.

(9) "Gasoline dispensing facility" means any site dispensing gasoline into motor vehicle fuel tanks from stationary storage tanks.

(10) "Gasoline loading terminal" means a gasoline transfer facility that receives more than ten percent of its annual gasoline throughput solely or in combination by pipeline, ship or barge, and loads gasoline into transport tanks.

(11) "Leak free" means a liquid leak of less than four drops per minute.

(12) "Modified" means any physical change in, or change in the method of operation of, a gasoline dispensing facility that increases the amount of any air contaminant emitted by such source or that results in the emission of any air contaminant not previously emitted. The term modified shall be construed consistent with the definitions of modification in Section 7411, Title 42, United States Code, and with rules implementing that section. Section 7411 exempts changes in gasoline throughput not resulting directly from a physical change.

(13) "NAAQS" means the National Ambient Air Quality Standard.

(14) "Ozone-contributing county" means a county in which the emissions have contributed to the formation of ozone in any county or area where violations of federal ozone standards have been measured, and includes: Cowlitz, Island, Kitsap, Lewis, Skagit, Thurston, Wahkiakum, and Whatcom counties.

(15) "Permanent residence" means a single-family or multi-family dwelling, or any other facility designed for use as permanent housing.

(16) "Stage I" means gasoline vapor recovery during all gasoline marketing transfer operations except motor vehicle refueling.

(17) "Stage II" means gasoline vapor recovery during motor vehicle refueling operations from stationary tanks.

(18) "Submerged fill line" means any discharge pipe or nozzle which meets either of the following conditions:

- Where the tank is filled from the top, the end of the discharge pipe or nozzle must be totally submerged when the liquid level is six inches from the bottom of the tank, or;
- Where the tank is filled from the side, the discharge pipe or nozzle must be totally submerged when the liquid level is eighteen inches from the bottom of the tank.

(19) "Submerged loading" means the filling of a tank with a submerged fill line.

(20) "Throughput" means the amount of material passing through a facility.

(21) "Top off" means to attempt to dispense gasoline to a motor vehicle fuel tank after a vapor recovery dispensing nozzle has shut off automatically.

(22) "Transport tank" means a container used for shipping gasoline over roadways.

(23) "True vapor pressure" means the equilibrium partial pressure of a petroleum liquid as determined by methods described in American Petroleum Institute Bulletin 2517, 1980.

(24) "Vapor balance system" means a system consisting of the transport tank, gasoline vapor transfer lines, storage tank, and all tank vents designed to route displaced gasoline vapors from a tank being filled with liquid gasoline.

(25) "Vapor collection system" means a closed system to conduct vapors displaced from a tank being filled into the tank being emptied, a vapor holding tank, or a vapor control system.

(26) "Vapor control system" means a system designed and operated to reduce or limit the emission of gasoline vapors emission into the ambient air.

(27) "Vapor tight" means a leak of less than one hundred percent of the lower explosive limit on a combustible gas detector measured at a distance of one inch from the source or no visible evidence of air entrainment in the sight glasses of liquid delivery hoses.

[Statutory Authority: RCW 70.94.165. 98-01-184 (Order 97-07), § 173-491-020, filed 12/23/97, effective 1/23/98. Statutory Authority: 1996 c 294. 97-04-012 (Order 95-15), § 173-491-020, filed 1/27/97, effective 2/27/97. Statutory Authority: RCW 70.94.331. 93-13-011 (Order 92-47), § 173-491-020, filed 6/7/93, effective 7/8/93; 91-14-101 (Order 90-63), § 173-491-020, filed 7/2/91, effective 8/2/91.]

**WAC 173-491-040 Gasoline vapor control requirements.** (1) Fixed-roof gasoline storage tanks.

(a) All fixed-roof gasoline storage tanks having a nominal capacity greater than forty thousand gallons shall comply with one of the following:

(i) Meet the equipment specifications and maintenance requirements of the federal standards of performance for new stationary sources - Storage Vessels for Petroleum Liquids (40 CFR 60, subparts K, KA and KB).

(ii) Be retrofitted with a floating roof or internal floating cover using a metallic seal or a nonmetallic resilient seal at least meeting the equipment specifications of the federal standards referred to in (a)(i) of this subsection or its equivalent.

(iii) Be fitted with a floating roof or internal floating cover meeting the manufacturer's equipment specifications in effect when it was installed.

(b) All seals used in (a)(ii) and (iii) of this subsection are to be maintained in good operating condition and the seal fabric shall contain no visible holes, tears, or other openings.

(c) All openings not related to safety are to be sealed with suitable closures.

(d) Tanks used for the storage of gasoline in bulk gasoline plants and equipped with vapor balance systems as required in subsection (3)(b) of this section shall be exempt from the requirements of subsection (1) of this section.

(2) Gasoline loading terminals.

(a) This chapter shall apply to all gasoline loading terminals with an average annual gasoline throughput greater than 7.2 million gallons.

(b) Loading facilities. Facilities for the purpose of loading gasoline into any transport tank shall be equipped with a vapor control system (VCS) as described in (c) of this subsection and comply with the following conditions:

(i) The loading facility shall equip submerged or bottom loading for all transport tanks.

(ii) The VCS shall be connected during the entire loading of all transport tanks.

(iii) The loading of all transport tanks shall be performed such that the transfer is at all times vapor tight. Emissions from pressure relief valves shall not be included in the controlled emissions when the back pressure in the VRS collection lines is lower than the relief pressure setting of the transport tank's relief valves.

(iv) All loading lines and vapor lines shall be equipped to close automatically when disconnected. The point of closure shall be on the tank side of any hose or intermediate connecting line.

(c) Vapor control system (VCS). The VCS shall be designed and built according to accepted industrial practices and meet the following conditions:

(i) The VCS shall not allow organic vapors emitted to the ambient air to exceed thirty-five milligrams per liter (three hundred twenty-two milligrams per gallon) of gasoline loaded.

(ii) The VCS shall be equipped with a device to monitor the system while the VCS is in operation.

(iii) The back pressure in the VCS collection lines shall not exceed the transport tank's pressure relief settings.

(3) Bulk gasoline plants.

(a) This section shall apply to all bulk gasoline plants with an average annual gasoline throughput greater than 7.2 million gallons.

(b) Deliveries to bulk gasoline plant storage tanks.

(i) The owner or operator of a bulk gasoline plant shall not permit the loading of gasoline into a storage tank equipped with vapor balance fittings unless the vapor balance system is attached to the transport tank and operated properly. The vapor balance system shall prevent at least ninety percent of the displaced gasoline vapors from entering the ambient air. A vapor balance system that is designed, built, and operated according to accepted industrial practices will satisfy this requirement.

(ii) Storage tank requirements. All storage tanks with a nominal capacity greater than five hundred fifty gallons and used for the storage of gasoline shall comply with the following conditions:

(A) Each storage tank shall be equipped with a submerged fill line.

(B) Each storage tank shall be equipped for vapor balancing of gasoline vapors with transport tanks during gasoline transfer operations.

(C) The vapor line fittings on the storage tank side of break points with the transport tank vapor connection pipe or hose shall be equipped to close automatically when disconnected.

(D) The pressure relief valves on storage tanks shall be set at the highest possible pressure consistent with local and state codes for fire and safety but in no case greater than ninety percent of the tank's safe working pressure.

(iii) Transport tank requirements. All transport tanks transferring gasoline to storage tanks in a bulk gasoline plant shall comply with the following conditions:

(A) The transport tank shall be equipped with the proper attachment fittings to make vapor tight connections for vapor balancing with storage tanks.

(B) The vapor line fittings on the transport tank side of break points with the storage tank connection pipe or hose shall be equipped to close automatically when disconnected.

(C) The pressure relief valves on transport tanks shall be set at the highest possible pressure consistent with local and state codes for fire and safety.

(c) Gasoline transfer operations.

(i) No owner or operator of a bulk gasoline plant or transport tank shall allow the transfer of gasoline between a stationary storage tank and a transport tank except when the following conditions exist:

(A) The transport tanks are being submerged filled or bottom loaded.

(B) The loading of all transport tanks, except those exempted under (c)(ii) of this subsection are being performed using a vapor balance system.

(C) The transport tanks are equipped to balance vapors and maintained in a leak tight condition in accordance with subsection (6) of this section.

(D) The vapor return lines are connected between the transport tank and the stationary storage tank and the vapor balance system is operated properly.

(ii) Transport tanks used for gasoline and meeting the following conditions shall be exempt from the requirement to be equipped with any attachment fitting for vapor balance lines if:

(A) The transport tank is used exclusively for the delivery of gasoline into storage tanks of a facility exempt from the vapor balance requirements of subsection (4) of this section; and the transport tank has a total nominal capacity less than four thousand gallons and is constructed so that it would require the installation of four or more separate vapor balance fittings; or

(B) In eastern Washington counties, a transport tank with a total nominal capacity less than four thousand gallons shall be exempt from the requirement to be fitted with any attachment fitting for vapor balance lines if the transport tank was in use prior to July 1, 1993. Replacement transport tanks or new equipment put into use July 1, 1993, or later are exempt from vapor balance requirements only as specified in (c)(ii)(A) of this subsection.

(4) Gasoline dispensing facilities (Stage I).

(a) This section shall apply to the delivery of gasoline to gasoline dispensing facilities located in ozone nonattainment areas with an annual gasoline throughput greater than two hundred thousand gallons and total storage capacity greater than ten thousand gallons, and to gasoline dispensing facilities located in ozone attainment areas with an annual gasoline throughput greater than three hundred sixty thousand gallons and all new gasoline dispensing facilities with a total gasoline nominal storage capacity greater than ten thousand gallons.

(b) All gasoline storage tanks of the facilities defined in (a) of this subsection shall be equipped with submerged or bottom fill lines and fittings to vapor balance gasoline vapors with the delivery transport tank.

(c) Gasoline storage tanks with offset fill lines shall be exempt from the requirement of (b) of this subsection if installed prior to January 1, 1979.

(d) The owner or operator of a gasoline dispensing facility shall not permit the loading of gasoline into a storage tank equipped with vapor balance fittings from a transport tank equipped with vapor balance fittings unless the vapor

balance system is attached to the transport tank and operated satisfactorily.

(5) Gasoline dispensing facilities (Stage II). **Determinations and requirements.** Ecology determines that Stage II vapor recovery systems at gasoline dispensing facilities in Cowlitz and Thurston counties are important to achieving or maintaining the NAAQS for Ozone in Clark and Pierce counties, respectively.

(a) Gasoline dispensing facilities are required to have certified Stage II vapor recovery systems under the following conditions:

(i) By December 31, 1998, all facilities located in an ozone nonattainment or maintenance plan county dispensing greater than six hundred thousand gallons of gasoline annually, except in Kitsap County, all facilities dispensing greater than eight hundred forty thousand gallons annually; and

(ii) All facilities that dispense in excess of one million two hundred thousand gallons of gasoline annually and are located in Thurston or Cowlitz counties. This requirement will end on December 31, 2002, unless ecology determines that Stage II is important to achieving or maintaining the NAAQS for Ozone in a nonattainment or maintenance plan county.

(b) Upon approval of a notice of construction under subsection (4)(e) of this section, Stage II is not required and may be removed from any gasoline dispensing facilities located in Whatcom, Skagit, Island, Lewis, and Wahkiakum counties, and from any gasoline dispensing facility located in Thurston and Cowlitz counties dispensing less than one million two hundred thousand gallons annually.

(c) In addition to subsection (5)(a) of this section, all new and modified gasoline dispensing facilities with an annual gasoline throughput of 1.5 million gallons and above are required to have Stage II gasoline vapor recovery systems if a lot with a permanent residence is within the distance and throughput specifications of Table 1 of this subsection, and as explained in (c)(i) and (ii) of this subsection.

Table 1

Gasoline Throughput (millions of gallons)	Allowable Distance to the Property Line (meters)
1.5	20
2.0	25
4.0	38
6.0	49
8.0	58
10.0	66

(i) When the throughput is not shown in the chart, interpolate to get the distance for that throughput.

(ii) The allowable distance shall be measured from the centroid of the pumps to the nearest point on the property line of the nearest lot on which a permanent residence is located. However, if the permanent residence is located at least twice the allowable distance from the centroid of the pumps, the requirements of (c) of this subsection shall not apply.

(d)(i) Beginning on July 1, 2001, and each year thereafter, the department of ecology shall publish the canister capture rate.

(ii) When the canister capture rate reaches fifteen percent and there are no major exceptions, waivers, or other adjustments to the EPA onboard canister regulations or program implementation, the department of ecology shall revise (c) of this subsection to incorporate the effect of canisters.

(e) The owner or operator of new or modified gasoline dispensing facilities subject to any of the requirements of (a), (b) or (c) of this subsection shall file a notice of construction and obtain the approval of the local air authority prior to commencing construction or modification.

(f) The owner or operator of any gasoline dispensing facility may elect to submit a site-specific analysis of the requirement for a Stage II vapor recovery system under (c) of this subsection and request the department of ecology to evaluate it subject to the fees described in (l) of this subsection. The department of ecology will complete a second tier analysis described under WAC 173-460-090 within forty-five days of determining that the analysis submitted is complete and no additional information is needed. The requirements for gasoline vapor control shall be determined as a result of that process.

(g) Fees. The fee for new source review of a gasoline dispensing facility under this section shall be the same as the fee under WAC 173-400-116 (2)(d)(ii) except, if a site-specific review is elected under (f) of this subsection, the fee shall be the same as the fee under WAC 173-400-116 (3)(c) for a tier two analysis.

(h) This section shall apply to the refueling of motor vehicles from stationary tanks at gasoline dispensing facilities located in Washington.

(i) All gasoline dispensing facilities subject to this section shall be equipped with a certified Stage II vapor recovery system.

(j) The owner or operator of a gasoline dispensing facility subject to this section shall not transfer or allow the transfer of gasoline from stationary tanks into motor vehicle fuel tanks unless a certified Stage II vapor recovery system is used.

(k) All Stage II vapor recovery equipment shall be installed in accordance with the system's certification requirements and shall be maintained to be leak free, vapor tight, and in good working order.

(l) Whenever a Stage II vapor recovery system component is determined to be defective, the owner or operator shall take the system out of service until it has been repaired, replaced, or adjusted, as necessary.

(m) The owner or operator of each gasoline dispensing facility utilizing a Stage II system shall conspicuously post operating instructions for the system in the gasoline dispensing area. The instructions shall clearly describe how to fuel vehicles correctly using the vapor recovery nozzles and include a warning against topping off. Additionally, the instructions shall include a prominent display of ecology's toll free telephone number for complaints regarding the operation and condition of the vapor recovery nozzles.

(6) Equipment or systems failures.

(a) Specific applicability. This section shall apply to all gasoline transport tanks equipped for gasoline vapor collec-

tion and all vapor collection systems at gasoline loading terminals, bulk gasoline plants, and gasoline dispensing facilities as described in subsections (2) through (5) of this section.

During the months of May, June, July, August, and September any failure of a vapor collection system at a bulk gasoline plant or gasoline loading terminal to comply with this section requires the discontinuation of gasoline transfer operations for the failed part of the system. Other transfer points that can continue to operate in compliance may be used. The loading or unloading of the transport tank connected to the failed part of the vapor collection system may be completed during the other months of the year.

(b) Provisions for specific processes.

(i) The owner or operator of a gasoline loading terminal or bulk gasoline plant shall only allow the transfer of gasoline between the facility and a transport tank if a current leak test certification for the transport tank is on file with the facility or a valid inspection sticker is displayed on the vehicle. Certification is required annually.

(ii) The owner or operator of a transport tank shall not make any connection to the tank for the purpose of loading or unloading gasoline, except in the case of an emergency, unless the gasoline transport tank has successfully completed the annual certification testing requirements in (c) of this subsection, and such certification is confirmed either by:

(A) Have on file with each gasoline loading or unloading facility at which gasoline is transferred a current leak test certification for the transport tank; or

(B) Display a sticker near the department of transportation certification plate required by 49 CFR 178.340-10b which:

(I) Shows the date that the gasoline tank truck last passed the test required in (c) of this subsection;

(II) Shows the identification number of the gasoline tank truck tank; and

(III) Expires not more than one year from the date of the leak tight test.

(iii) The owner or operator of a vapor collection system shall:

(A) Operate the vapor collection system and the gasoline loading equipment during all loadings and unloadings of transport tanks equipped for emission control such that:

(I) The tank pressure will not exceed a pressure of eighteen inches of water or a vacuum of six inches of water;

(II) The concentration of gasoline vapors is below the lower explosive limit (LEL, measured as propane) at all points a distance of one inch from potential leak sources; and

(III) There are no visible liquid leaks except for a liquid leak of less than four drops per minute at the product loading connection during delivery.

(IV) Upon disconnecting transfer fittings, liquid leaks do not exceed ten milliliters (0.34 fluid ounces) per disconnect averaged over three disconnects.

(B) Repair and retest a vapor collection system that exceeds the limits of (b)(iii)(A) of this subsection within fifteen days.

(iv) The department or local air authority may, at any time, monitor a gasoline transport tank and vapor collection system during loading or unloading operations by the

procedure in (c) of this subsection to confirm continuing compliance with this section.

(c) Testing and monitoring.

(i) The owner or operator of a gasoline transport tank or vapor collection system shall, at his own expense, demonstrate compliance with (a) and (b) of this subsection, respectively. All tests shall be made by, or under the direction of, a person qualified to perform the tests and approved by the department.

(ii) Testing to determine compliance with this section shall use procedures approved by the department.

(iii) Monitoring to confirm continuing leak tight conditions shall use procedures approved by the department.

(d) Recordkeeping.

(i) The owner or operator of a gasoline transport tank or vapor collection system shall maintain records of all certification tests and repairs for at least two years after the test or repair is completed.

(ii) The records of certification tests required by this section shall, as a minimum, contain:

(A) The transport tank identification number;

(B) The initial test pressure and the time of the reading;

(C) The final test pressure and the time of the reading;

(D) The initial test vacuum and the time of the reading;

(E) The final test vacuum and the time of the reading;

(F) At the top of each report page the company name, date, and location of the tests on that page; and

(G) Name and title of the person conducting the test.

(iii) The owner or operator of a gasoline transport tank shall annually certify that the transport tank passed the required tests.

(iv) Copies of all records required under this section shall immediately be made available to the department, upon written request, at any reasonable time.

(e) Preventing evaporation. All persons shall take reasonable measures to prevent the spilling, discarding in sewers, storing in open containers, or handling of gasoline in a manner that will result in evaporation to the ambient air.

[Statutory Authority: RCW 70.94.165. 98-01-184 (Order 97-07), § 173-491-040, filed 12/23/97, effective 1/23/98. Statutory Authority: 1996 c 294. 97-04-012 (Order 95-15), § 173-491-040, filed 1/27/97, effective 2/27/97. Statutory Authority: RCW 70.94.331. 93-13-011 (Order 92-47), § 173-491-040, filed 6/7/93, effective 7/8/93; 91-14-101 (Order 90-63), § 173-491-040, filed 7/2/91, effective 8/2/91.]

#### WAC 173-491-050 Reserved.

[Statutory Authority: 1996 c 294. 97-04-012 (Order 95-15), § 173-491-050, filed 1/27/97, effective 2/27/97. Statutory Authority: RCW 70.94.331. 93-13-068 (Order 92-47), § 173-491-050, filed 6/17/93, effective 7/18/93; 93-03-089 (Order 92-42), § 173-491-050, filed 1/20/93, effective 2/20/93; 91-14-101 (Order 90-63), § 173-491-050, filed 7/2/91, effective 8/2/91.]

## Title 174 WAC

# THE EVERGREEN STATE COLLEGE

### Chapters

**174-122 Mid-contract termination with adequate cause.**

**174-130 Tuition and fees.**

**174-133 Organization.**

**174-140 State Environmental Policy Act rules.**

**174-276 Access to public records.**

### Chapter 174-122 WAC

#### MID-CONTRACT TERMINATION WITH ADEQUATE CAUSE

#### WAC

174-122-010 through 174-122-040 Repealed.

#### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

174-122-010 Preamble. [Statutory Authority: Chapter 34.05 RCW. 90-04-011, § 174-122-010, filed 1/26/90, effective 2/26/90.] Repealed by 97-13-047, filed 6/13/97, effective 7/14/97. Statutory Authority: RCW 28B.40.120(12).

174-122-020 Informal procedures. [Statutory Authority: Chapter 34.05 RCW. 90-04-011, § 174-122-020, filed 1/26/90, effective 2/26/90.] Repealed by 97-13-047, filed 6/13/97, effective 7/14/97. Statutory Authority: RCW 28B.40.120(12).

174-122-030 Formal hearing procedures. [Statutory Authority: Chapter 34.05 RCW. 90-04-011, § 174-122-030, filed 1/26/90, effective 2/26/90.] Repealed by 97-13-047, filed 6/13/97, effective 7/14/97. Statutory Authority: RCW 28B.40.120(12).

174-122-040 Summary suspension. [Statutory Authority: Chapter 34.05 RCW. 90-04-011, § 174-122-040, filed 1/26/90, effective 2/26/90.] Repealed by 97-13-047, filed 6/13/97, effective 7/14/97. Statutory Authority: RCW 28B.40.120(12).

**WAC 174-122-010 through 174-122-040 Repealed.**  
See Disposition Table at beginning of this chapter.

### Chapter 174-130 WAC TUITION AND FEES

#### WAC

174-130-010 through 174-130-020 Repealed.

#### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

174-130-010 Tuition and fee schedules. [Statutory Authority: Chapter 34.05 RCW. 90-04-011, § 174-130-010, filed 1/26/90, effective 2/26/90.] Repealed by 97-13-047, filed 6/13/97, effective 7/14/97. Statutory Authority: RCW 28B.40.120(12).

174-130-020 Location of schedules. [Statutory Authority: Chapter 34.05 RCW. 90-04-011, § 174-130-020, filed 1/26/90, effective 2/26/90.] Repealed by 97-13-047, filed 6/13/97, effective 7/14/97. Statutory Authority: RCW 28B.40.120(12).

**WAC 174-130-010 through 174-130-020 Repealed.**  
See Disposition Table at beginning of this chapter.