

Express Terms for Amendments to 6 NYCRR Parts 700-704

PART 700

Existing section 700.1 is AMENDED to read as follows:

Section 700.1 Definitions.

(a) The terms, words, or phrases used in Parts 700-[705] 706 of this Title shall have the meanings described below.

(1) Acute toxic effect means an effect that usually occurs shortly after the administration of either a single dose or multiple doses of a chemical or other toxic pollutant.

(2) Administrator means the Administrator of the United States Environmental Protection Agency.

(3) Approved treatment as applied to water supplies means treatment accepted as satisfactory by the authorities responsible for exercising supervision over the quality of water supplies.

(4) Aquatic life or aquatic biota means fish, shellfish and those species of wildlife and plants that spend at least part of their life in water.

([4]5) Best usages as specified for each class of water means those uses as determined by the commissioner in accordance with the considerations prescribed by the Environmental Conservation Law.

(6) Biologically-based dose-response model means a model that describes and quantifies the key events in the molecular, cellular, tissue, or organismal responses to a chemical or other toxic pollutant across a range of doses. Model parameters should represent biological phenomena rather than arbitrary statistically-derived values such as polynomial regression coefficients. Such models, if they accurately describe the relationship between dose and response within the range of experimental observation, may provide biological justification for predicted responses at doses below the range of observation.

([5]7) Chronic toxic effect means an effect that is irreversible or progressive or occurs because the rate of injury is greater than the rate of repair during prolonged exposure to a chemical or other toxic pollutant.

([6]8) Coastal waters mean those marine waters within the territorial limits of the State other than estuaries and enclosed bays. Long Island Sound is designated as coastal waters for the purposes of thermal discharges.

([7]9) Commissioner means the Commissioner of the Department of Environmental Conservation.

([8]10) Consolidated rock or bedrock means the compact or solid hard rock beneath or exposed at the surface of the earth or overlain by surface waters.

(11) Cooling water means water used for contact or noncontact cooling, including water used for

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equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content. The intended use of the cooling water is to absorb waste heat rejected from the process or processes used, or from auxiliary operations on the facility's premises.

(12) Cooling water intake structure means the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the State. The cooling water intake structure extends from the point at which water is withdrawn from the waters of the State up to, and including, the intake pumps.

([9]13) Department means the New York State Department of Environmental Conservation.

([10]14) Disposal system means a system for disposing of sewage, industrial waste or other wastes, including sewer systems and treatment works.

([11]15) Effluent limitations mean any restriction on quantities, qualities, rates and concentrations of chemical, physical, biological, and other constituents of effluents that are discharged into or allowed to run from an outlet or point source or any other discharge within the meaning of section 17-0501 of the Environmental Conservation Law into surface waters, groundwater or unsaturated zones.

([12]16) Enclosed bays mean those marine waters within the territorial limits of New York State, other than coastal waters or estuaries, in which exchange of sea water is severely limited by barrier beaches. For the purpose of thermal discharges, the following are designated as enclosed bays: Jamaica Bay, Hempstead Bay, Great South Bay, Moriches Bay, Shinnecock Bay and Mecox Bay.

([13]17) Estuary means the tidal portion of a river or stream.

(18) Fish means all varieties of the super-class Pisces.

(19) Flow means the volume of water passing through the cross-sectional area of stream (or river) per unit of time.

([14]20) Fresh groundwaters mean those groundwaters having a chloride concentration equal to or less than 250 mg/L or a total dissolved solids concentration equal to or less than 1,000 mg/L.

([15]21) Great Lakes System means classified segments identified in Part 805; Parts 835 through 839; Parts 845 through 848; Parts 820 and 821; Parts 895 through 899; and Items 1a, 1b and 441 through 1661 of Part 910 of this Title.

([16]22) Groundwaters mean those waters in saturated zones.

([17]23) Groundwater effluent limitations mean those effluent limitations that have been adopted in section 703.6 or developed in accordance with section 702.16(c) of this Title for protection of groundwater.

([18]24) Guidance value means such measure of purity or quality for any waters in relation to their reasonable and necessary use as may be established by the department pursuant to sections 702.1 and 702.15 of this Title.

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([19]25) Heat of artificial origin means all heat from other than natural sources, including but not limited to cumulative effects of multiple and proximate thermal discharges.

([20]26) Industrial waste means any liquid, gaseous, solid or waste substance, or a combination thereof, resulting from any process of industry, manufacturing, trade, or business or from the development or recovery of any natural resources, that may cause or might reasonably be expected to cause pollution of the waters of the State in contravention of the standards adopted pursuant to the Environmental Conservation Law, article 17.

(27) Key event means a measurable and necessary step in a mode-of-action or a measurable indicator of such a step.

([21]28) Land application techniques include the following three basic methods of waste discharge application: irrigation, infiltration-percolation, and overland flow.

([22]29) Land utilization practices entail the use of plants, the soil surface, and soil matrix for removal of certain wastewater constituents.

(30) Linear at low doses means the frequency or severity of a molecular, cellular, tissue, or organismal response (i.e., key event) to a chemical or other toxic pollutant varies proportionally with dose at human doses that are at or near the standard or guidance value for that chemical or toxic pollutant.

(31) Lowest-Observed-Effect Level (LOEL) means the lowest dose or exposure level of a chemical or other toxic pollutant at which a statistically or biologically significant change in the frequency or severity of any effect is observed in the exposed population compared with an appropriate unexposed control population.

([23]32) Micrograms per liter (ug/L) means the weight in micrograms of any specific substance or substances contained in one liter of liquid.

([24]33) Milligrams per liter (mg/L) means the weight in milligrams of any specific substance or substances contained in one liter of liquid.

(34) Model means a mathematical function with parameters that can be adjusted so that the function closely describes a set of empirical data.

(35) Mode-of-action means a sequence of key events that provides a biologically-plausible explanation for how a chemical or other toxic pollutant interacts with a biological target in humans or experimental animals to cause a given effect.

([25]36) New York/New Jersey harbor means saltwater classified segments identified in Part 859; Part 864; Part 890, except Item 1 and its tributaries; Part 891; and Items 1, 2 and 3 and their tributaries of Part 935 of this Title.

(37) No-Observed-Effect Level (NOEL) means the highest dose or exposure level of a chemical or other toxic pollutant at which there are no statistically or biologically significant changes in the frequency or severity of any observed effect in the exposed population compared with an

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appropriate unexposed control population.

(38) Nonlinear at low doses means the frequency or severity of a molecular, cellular, tissue, or organismal response (i.e., key event) to a chemical or other toxic pollutant does not vary proportionally with dose at human doses that are at or near the standard or guidance value for that chemical or toxic pollutant.

([26]39) Oncogenic effect means the induction of tumors that has been demonstrated in:

- (i) humans;
- (ii) two mammalian species;
- (iii) one mammalian species, independently reproduced;
- (iv) one mammalian species, to an unusual degree with respect to incidence, latency period, site, tumor type, or age at onset;
- (v) one mammalian species, supported by positive results in short-term tests that are indicative of potential oncogenic activity; or
- (vi) one mammalian species, supported by positive results for another substance for which similar oncogenic effects are anticipated because of similarity of functional groups or metabolic or toxicologic pathways.

([27]40) Other wastes means garbage, refuse, decayed wood, sawdust, shavings, bark, sand, lime, cinders, ashes, offal, oil, tar, dyestuffs, acids, chemicals, leachate, sludge, salt and all other discarded matter not sewage or industrial waste that may cause or might reasonably be expected to cause pollution of the waters of the State in contravention of the standards adopted pursuant to the Environmental Conservation Law, article 17.

([28]41) Outlet means the terminus of a sewer system, or the point of emergence of any waterborne sewage, industrial waste or other wastes or the effluent therefrom, into the waters of the State.

([29]42) Pathogenic organism means any disease-producing organism.

([30]43) Person or persons means any individual, public or private corporation, political subdivision, government agency, municipality, industry, co-partnership, association, firm, trust, estate or any other legal entity whatsoever.

(44) Point-of-departure means a point on a dose-response curve for an effect of a chemical or other toxic pollutant that is within or near the range of experimental or observational data for the effect. It shall be the lower 95 percent confidence limit on a dose for an estimated level of excess risk for an effect, or it can be a NOEL or LOEL for an effect. It is the starting point for the extrapolation from the range of observation in human or animal studies to the human doses at or near the standard or guidance value for that chemical or toxic pollutant.

([31]45) Point source means any discernible, confined and discrete conveyance, including but not

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limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft from which pollutants are or may be discharged.

([32]46) Pollutant means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, and industrial, municipal, and agricultural waste discharged into water.

([33]47) Pollution means the presence in the environment of conditions and/or contaminants in quantities of characteristics that are or may be injurious to human, plant or animal life or to property or that unreasonably interfere with the comfortable enjoyment of life and property throughout such areas of the State as shall be affected thereby.

([34]48) Potable waters mean those fresh waters usable for drinking, culinary or food processing purposes.

([35]49) Primary contact recreation means recreational activities where the human body may come in direct contact with raw water to the point of complete body submergence. Primary contact recreation includes, but is not limited to, swimming, diving, water skiing, skin diving and surfing.

([36]50) Principal organic contaminant classes means the classes of organic chemicals listed below.

(i) Halogenated alkane: compound containing carbon (C), hydrogen (H) and halogen (X) where X = fluorine (F), chlorine (Cl), bromine (Br) and/or iodine (I), having the general formula $C_nH_yX_z$, where $y + z = 2n + 2$; n, y and z are integer variables; n and z are equal to or greater than one and y is equal to or greater than zero. Specifically excluded from this class are chloroform, bromoform, bromodichloromethane and dibromochloromethane.

(ii) Halogenated ether: compound containing carbon (C), hydrogen (H), oxygen (O) and halogen (X) (where X = F, Cl, Br and/or I) having the general formula $C_nH_yX_zO$, where $y + z = 2n + 2$; the oxygen is bonded to two carbons; n, y and z are integer variables; n is equal to or greater than two, y is equal to or greater than zero and z is equal to or greater than one.

(iii) Halobenzenes and substituted halobenzenes: derivatives of benzene which have at least one halogen atom attached to the ring and which may or may not have straight or branched chain hydrocarbon, nitrogen or oxygen substituents.

(iv) Benzene and alkyl- or nitrogen-substituted benzenes: benzene or a derivative of benzene which has either an alkyl- and/or a nitrogen-substituent.

(v) Substituted, unsaturated hydrocarbons: a straight or branched chain unsaturated hydrocarbon compound containing one of the following: halogen, aldehyde, nitrile or amide.

(vi) Halogenated nonaromatic cyclic hydrocarbons: a nonaromatic cyclic compound containing a halogen.

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(51) Reference dose (RfD) means an estimate of a daily oral exposure of the human population (including sensitive subgroups) to a chemical or other toxic pollutant that is likely to be without an appreciable risk of deleterious effects during a lifetime.

([37]52) Saline groundwater means groundwater having a chloride concentration of more than 250 mg/L or a total dissolved solids concentration of more than 1,000 mg/L.

([38]53) Saline surface waters mean all waters that are so designated by the commissioner.

(54) Salmonids, see "Trout."

([39]55) Saturated zones means any extensive portion of the earth's crust that contains sufficient water to fill all interconnected voids or pore spaces.

([40]56) Secondary contact recreation means recreational activities where contact with the water is minimal and where ingestion of the water is not probable. Secondary contact recreation includes, but is not limited to, fishing and boating.

([41]57) Sewage means the water-carried human or animal wastes from residences, buildings, industrial establishments or other places, together with such groundwater infiltration and surface water as may be present.

(58) Shellfish includes oysters, scallops, clams, mussels, and other aquatic mollusks, and lobsters, shrimp, crayfish, crabs, and other aquatic crustaceans.

([42]59) Source of water supply for drinking, culinary or food processing purposes means any water source, either public or private, that is used for domestic consumption or used in connection with the processing of milk, beverages or food.

([43]60) Specific MCL means a maximum contaminant level (MCL) included in 10 NYCRR 5-1.51, 5-1.52 or 5-1.55 for either an individual substance or group of substances. A Specific MCL does not include the 10 NYCRR Part 5 MCLs for principal organic contaminants or unspecified organic contaminants.

([44]61) Standards mean such measures of purity or quality for any waters in relation to their reasonable and necessary use as may be established by the department pursuant to section 17-0301 of the Environmental Conservation Law.

([45]62) Subsurface sewage disposal system means a disposal system that discharges sewage beneath the surface of the ground.

([46]63) Thermal discharge means a discharge that results or would result in a temperature change of the receiving water.

([47]64) Toxic pollutant means those pollutants, or combination of pollutants, including disease-causing agents, that after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly through food chains, will, on the basis of information available to the department, cause death, disease,

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behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations, in such organisms or their offspring.

([48]65) Treatment works means any plant, disposal field, lagoon, pumping station, constructed drainage ditch or surface water intercepting ditch, incinerator, area devoted to sanitary landfills or other works not specifically mentioned here, installed for the purpose of treating, neutralizing, stabilizing or disposing of sewage, industrial waste or other wastes.

(66) Trout means any fish in the following genera: "Coregonus," "Oncorhynchus," "Prosopium," "Salmo," "Salvelinus," and "Thymallus."

(67) Trout waters are waters that provide habitat in which trout can survive and grow within a normal range on a year-round basis, or on a year-round basis excepting periods of time during which almost all of the trout inhabiting such waters could and would temporarily retreat into and survive in adjoining or tributary waters due to natural circumstances. When these conditions exist or have been met a water may be classified as a trout water and identified with the symbol (T), appearing in an entry in the "standards" column in the classification tables of Parts 800 through 941 of this Title.

(68) Trout spawning waters are trout waters in which trout eggs can be deposited and be fertilized by trout inhabiting such waters (or connecting waters) and in which those eggs can develop and hatch, and the trout hatched therefrom could survive and grow to a sufficient size and stage of development to enable them to either remain and grow to adult trout therein, or migrate into and survive in other trout waters. When these conditions exist or have been met a water may be classified as a trout spawning water and identified with the symbol (TS), appearing in an entry in the "standards" column in the classification tables of Parts 800 through 941 of this Title.

([49]69) Unconsolidated deposits means all non- or poorly indurated soil materials above the bedrock.

([50]70) Waste management system includes the management of mechanical equipment, crops, irrigation and monitors as an operational unit.

([51]71) Water quality-based effluent limitations means effluent limitations for surface waters that are derived from water quality standards or guidance values.

(72) Wildlife means wild game and all other animal life existing in a wild state, except fish, shellfish, and crustacea.

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PART 701

Existing section 701.2 is AMENDED to read as follows:

Section 701.2 Class N fresh surface waters.

(a) The best usages of Class N waters are the enjoyment of water in its natural condition and, where compatible, as a source of water for drinking or culinary purposes, bathing, fishing, fish propagation, and recreation. The waters shall be suitable for shellfish and wildlife propagation and survival and fish survival.

Existing subdivisions (b) and (c) are unchanged.

New subdivision (d) is ADOPTED to read as follows:

(d) There shall be no alteration to flow that will impair the waters for their best usages.

Existing section 701.3 is AMENDED to read as follows:

Section 701.3 Class AA-Special (AA-S) fresh surface waters.

(a) The best usages of Class AA-S waters are: a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

Existing subdivisions (b), (c) and (d) are unchanged.

New subdivisions (e) and (f) are ADOPTED to read as follows:

(e) There shall be no alteration to flow that will impair the waters for their best usages.

(f) There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions.

Existing section 701.4 is AMENDED to read as follows:

Section 701.4 Class A-Special (A-S) fresh surface waters.

(a) The best usages of Class A-S waters are: a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

Existing subdivision (b) is unchanged.

Existing section 701.5 is AMENDED to read as follows:

Section 701.5 Class AA fresh surface waters.

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(a) The best usages of Class AA waters are: a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

Existing subdivision (b) is unchanged.

Existing section 701.6 is AMENDED to read as follows:

Section 701.6 Class A fresh surface waters.

(a) The best usages of Class A waters are: a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

Existing subdivision (b) is unchanged.

Existing section 701.7 is AMENDED to read as follows:

Section 701.7 Class B fresh surface waters.

The best usages of Class B waters are primary and secondary contact recreation and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

Existing section 701.8 is AMENDED to read as follows:

Section 701.8 Class C fresh surface waters.

The best usage of Class C waters is fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

Existing section 701.9 is AMENDED to read as follows:

Section 701.9 Class D fresh surface waters.

The best usage of Class D waters is fishing. Due to such natural conditions as intermittency of flow, water conditions not conducive to propagation of game fishery, or stream bed conditions, the waters will not support fish propagation. These waters shall be suitable for fish, shellfish, and wildlife survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

Existing heading "SALINE SURFACE WATERS" is unchanged.

Existing section 701.10 is AMENDED to read as follows:

Section 701.10 Class SA saline surface waters.

The best usages of Class SA waters are shellfishing for market purposes, primary and secondary

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contact recreation and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

Existing section 701.11 is AMENDED to read as follows:

Section 701.11 Class SB saline surface waters.

The best usages of Class SB waters are primary and secondary contact recreation and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

Existing section 701.12 is AMENDED to read as follows:

Section 701.12 Class SC saline surface waters.

The best usage of Class SC waters is fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes.

Existing section 701.13 is AMENDED to read as follows:

Section 701.13 Class I saline surface waters.

The best usages of Class I waters are secondary contact recreation and fishing. The waters shall be suitable for fish, shellfish, and wildlife propagation and survival.

Existing section 701.14 is AMENDED to read as follows:

Section 701.14 Class SD saline surface waters.

The best usage of Class SD waters is fishing. These waters shall be suitable for fish, shellfish, and wildlife survival. This classification may be given to those waters that, because of natural or man-made conditions, cannot meet the requirements for primary and secondary contact recreation and fish propagation.

New heading to be located immediately following existing section 701.24 is ADOPTED to read as follows:

TROUT WATERS

New section 701.25 is ADOPTED to read as follows:

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Section 701.25 Trout waters (T or TS)

(a) The symbol (T), appearing in an entry in the "standards" column in the classification tables of Parts 800 through 941 of this Title, means that the classified waters in that specific Item are trout waters. Any water quality standard, guidance value, or thermal criterion that specifically refers to trout or trout waters applies.

(b) The symbol (TS), appearing in an entry in the "standards" column in the classification tables of Parts 800 through 941 of this Title, means that the classified waters in that specific Item are trout spawning waters. Any water quality standard, guidance value, or thermal criterion that specifically refers to trout, trout spawning, trout waters, or trout spawning waters applies.

Existing section 701.25 is RENUMBERED 701.26

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PART 702

Existing subdivision 702.1(c) is AMENDED to read as follows:

702.1(c) Standards and guidance values shall be of the following Types to protect the best usages of the waters as described in Part 701 of this Title:

- (1) Health (Water Source) or H(W.S);
- (2) Health (Fish Consumption) or H(F.C);
- (3) Aquatic (Chronic) or A(C);
- (4) Aquatic (Acute) or A(A);
- (5) Wildlife or W; [and]
- (6) [Aesthetic or E] Aesthetic (Water Source) or E(W.S);
- (7) Aesthetic (Food Source) or E(F.S); and
- (8) Recreation or R.

Nothing else within existing section 702.1 is changed.

Existing subdivision 702.2(c) is REPEALED and new subdivisions (c), (d), and (e) are ADOPTED to read as follows:

702.2(c) Standards or guidance values based on oncogenic effects that are based on the 95 percent lower confidence limit on the human dose corresponding to an excess lifetime cancer risk of one-in-one million or on chemical correlation to such effects shall be derived using age-specific water consumption rates and points-of-departure for a lifetime exposure period of 70 years if scientific evidence is sufficient to show that children may be more sensitive than adults to such oncogenic effects. If such scientific evidence is not available, a consumption rate of two liters of water per day for a lifetime exposure period of 70 years shall be used.

702.2(d) Standards or guidance values based on oncogenic effects that are based on the human equivalent dose at the point-of-departure divided by an uncertainty factor, chronic nononcogenic effects, or chemical correlation to such effects shall be derived using age-specific water consumption rates for a childhood exposure period (18 years or less) if scientific evidence is sufficient to show that children may be more sensitive than adults to such effects. If such scientific evidence is not available, a consumption rate of two liters of water per day shall be used.

702.2(e) Standards or guidance values based on acute nononcogenic effects or chemical correlation to acute nononcogenic effects shall be derived using a consumption rate of one liter of water per day or a different water consumption rate if deemed more appropriate based on scientific evidence.

Nothing else within existing section 702.2 is changed.

Existing section 702.4 is REPEALED and new section 702.4 is ADOPTED to read as follows:

Section 702.4 Procedures for deriving standards and guidance values based on oncogenic effects.

(a) Standards and guidance values based on oncogenic effects shall be calculated using dose-

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response data from scientifically valid human or animal studies. Considering factors including but not limited to route, duration and timing of exposure, species, strain, tumor types and sites, nature and severity of effects, pharmacokinetics, mode-of-action, study quality, and statistical significance, the dose-response data deemed to be the most appropriate for evaluating potential human health risks at environmental exposures shall be used as the basis of the value.

(b) Standards and guidance values shall be based on the point-of-departure for the selected dose-response data.

(1) The point-of-departure shall be the LED10, which is the 95 percent lower confidence limit on the dose associated with 10 percent excess risk for oncogenic effects adjusted for background risk. A different level of excess risk may be used if deemed more appropriate based on scientific evidence.

(2) The point-of-departure shall be estimated using a validated, biologically-based dose-response model. If such a model does not exist, the point-of-departure shall be estimated using a mathematical model (i.e., the multistage, probit, logistic, or Weibull model) that best describes the dose-response data within the range of observation. Statistical measures, including the Chi-squared goodness-of-fit test, shall be used to determine which model best describes the data.

(3) If the selected dose-response data are not adequately described by methods in section 702.4(b)(2) of this Part, an alternative point-of-departure (e.g., a NOEL or LOEL) shall be used.

(c) If the point-of-departure is derived from an animal study, the human equivalent dose (milligrams of substance per kilogram of body weight per day) at the point-of-departure shall be estimated by multiplying the animal-to-human body weight ratio raised to the 0.25 power by the animal dose in milligrams of substance per kilogram of body weight per day. An alternative trans-species conversion method may be used if deemed more appropriate based on scientific evidence.

(d) The standard or guidance value shall be derived by extrapolating from the point-of-departure to the human dose at the standard or guidance value.

(1) If a validated biologically-based dose-response model is used to estimate the point-of-departure, the standard or guidance value shall be based on the 95 percent lower confidence limit on the human dose corresponding to an excess lifetime cancer risk of one-in-one million and shall be estimated using the model. If such a model is not available or is not validated for humans, the extrapolation method from the point-of-departure to the human dose at the standard or guidance value shall depend on the results of a mode-of-action analysis.

(2) If data on mode-of-action are unavailable, or if the mode-of-action analysis provides evidence of linearity at low doses or does not provide unequivocal evidence of nonlinearity at low doses, the standard or guidance value shall be based on the 95 percent lower confidence limit on the human dose corresponding to an excess lifetime cancer risk of one-in-one million. The human dose at the standard or guidance value shall be estimated by multiplying the human equivalent dose at the point-of-departure derived according to sections 702.4(b)(1) and 702.4(b)(2) of this Part by a factor equal to the risk level of one-in-one million divided by the risk level at the point-of-departure.

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(3) If a mode-of-action analysis provides no evidence for linearity at low doses and provides unequivocal evidence of nonlinearity at low doses, the standard or guidance value shall be based on the human equivalent dose at the point-of-departure identified by the methods in section 702.4(b) of this Part divided by an uncertainty factor that will insure that the human dose at the standard or guidance value will be without appreciable risk to the human population, including children. The magnitude of this factor will generally range from 10 to 3,000. Factors that will be considered in determining the magnitude of the uncertainty factor shall include: the nature of the dose-response curve and the point-of-departure; the relative sensitivities of experimental animals and humans; the nature and extent of human variation, including age-dependent differences in sensitivity during a lifetime; and the data gaps in the toxicological database.

(e) Standards and guidance values based on the 95 percent lower confidence limit on the human dose corresponding to an excess lifetime cancer risk of one-in-one million shall be derived using age-specific body weights for a lifetime exposure period of 70 years if scientific evidence is sufficient to show that children may be more sensitive than adults to the oncogenic effect. If such evidence is not available, a body weight of 70 kilograms and a lifetime exposure period of 70 years shall be used.

(f) Standards and guidance values based on the human equivalent dose at the point-of-departure divided by an uncertainty factor shall allow no more than 20 percent of the human dose at the standard or guidance value to come from drinking water and shall be derived using age-specific body weights for a childhood exposure period (18 years or less) if scientific evidence is sufficient to show that children may be more sensitive than adults to the oncogenic effect. If such evidence is not available, a body weight of 70 kilograms shall be used.

Existing section 702.5 is REPEALED and new section 702.5 is ADOPTED to read as follows:

Section 702.5 Procedures for deriving standards and guidance values based on nononcogenic effects.

(a) Standards and guidance values based on nononcogenic effects shall be calculated using dose-response data from scientifically valid human or animal studies. Considering factors, including but not limited to route, duration and timing of exposure, species, strain, nature and severity of effects, pharmacokinetics, mode-of-action, study quality and statistical significance, the dose-response data deemed to be the most appropriate for evaluating potential human health risks at environmental exposures shall be used as the basis of the value.

(b) Standards and guidance values shall be based on the point-of-departure for the selected dose-response data.

(1) The point-of-departure shall be the no-observed-effect level (NOEL), expressed as a dose in milligrams of substance per kilogram of body weight per day. Where a valid NOEL is not available, a lowest-observed-effect level (LOEL) may be used.

(2) If neither a NOEL or a LOEL are available, an alternative point-of-departure, e.g., the 95 percent lower confidence limit on the dose associated with a specified percentage of excess risk (e.g., 10 percent) for a nononcogenic effect adjusted for background risk, may be used. The alternative point-of-departure shall be estimated using one of the mathematical models that are

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appropriate for analysis of dichotomous or continuous dose-response data (e.g., power, polynomial, or linear), and shall be the model that best describes the dose-response data within the range of experimental observation. Statistical measures, including the Chi-squared goodness-of-fit test, shall be used to determine which model best describes the data.

(c) The standard or guidance value shall be derived by extrapolating from the point-of-departure to the reference dose (RfD). The RfD shall be estimated by dividing the NOEL (or LOEL, or an alternative point-of-departure) by an uncertainty factor. The magnitude of this factor shall insure that exposures at or below the reference dose are without appreciable risk to the human population, including children, and will generally range from 10 to 3,000. It shall account for the following areas of uncertainty:

(1) LOEL to NOEL extrapolation (where necessary, to account for uncertainty where extrapolating from a LOEL to a NOEL);

(2) subchronic to chronic extrapolation (where necessary, to account for uncertainty where extrapolating from a less-than-chronic study NOEL (or LOEL, or other point-of-departure) to a chronic NOEL, LOEL, or other point-of-departure;

(3) animal to human extrapolation (where necessary, to account for uncertainty where extrapolating from experimental animals to humans);

(4) inter-human variability (where necessary, to account for variation in sensitivity among the human population, including special consideration of the potential sensitivity of children); and

(5) data gaps (where necessary, to account for areas of scientific uncertainty in the toxicological database).

(d) Standards and guidance values based on chronic toxic effects shall allow no more than 20 percent of the reference dose to come from drinking water and shall be derived using age-specific body weights for a childhood exposure period (18 years or less) if scientific evidence is sufficient to show that children may be more sensitive than adults to such effects. If such evidence is not available, a body weight of 70 kilograms shall be used.

(e) Standards and guidance values based on acute toxic effects shall allow 20 percent of the reference dose to come from drinking water and shall be derived using a child body weight of 10 kilograms. Alternative values for percentage of reference dose or for body weight may be used if deemed more appropriate based on scientific evidence.

Existing section 702.7 is AMENDED to read as follows:

Section 702.7 Procedure for deriving standards and guidance values based on chemical correlation.

[Where] If the available data are deemed insufficient for deriving a standard or guidance value on the basis of either of sections 702.4 or 702.5 of this Part, a standard or guidance value may be based on correlation to a chemical for which a standard or guidance value has been established pursuant to those sections. [Values] Standards or guidance values based on chemical correlation

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may be established [where] if similar toxic effects are anticipated because of similarity of functional groups or metabolic or toxicologic pathways.

Existing section 702.8 is AMENDED to read as follows:

Section 702.8 Procedures for deriving standards and guidance values for protection of human health from consumption of fish.

Standards and guidance values for the protection of the best usage of fishing shall protect the health of human consumers of [finfish] fish and, for Class SA waters, human consumers of shellfish from chemicals that may bioaccumulate and are referred to as Health (Fish Consumption) values.

(a) Standards and guidance values based on bioaccumulation and human consumption of fish shall be equal to the acceptable daily intake from fish consumption divided by a fish consumption rate of 0.033 kilograms per day and by a bioaccumulation factor.

(b) The acceptable daily intake, in micrograms per day, from fish consumption shall be the more stringent of:

(1) 20 percent of the [ADI] reference dose (for nononcogenic effects) as determined from section 702.5 or 702.7 of this Part; or

(2) the human dose at the standard or guidance value (for oncogenic effects) as determined from section 702.4 or 702.7 of this Part.

(c) The bioaccumulation factor is the ratio of the concentration of a substance in fish flesh, in micrograms per kilogram, to the concentration in water, in micrograms per liter. Bioaccumulation factors will generally be based on measured values which may be supported by bioaccumulation factors derived from octanol/water partition coefficients.

Existing section 702.9 is AMENDED to read as follows:

702.9(d) Where the waters are to be suitable for [both] fish, shellfish, and wildlife propagation and survival, both Aquatic (Chronic) and Aquatic (Acute) standards or guidance values shall apply.

702.9(e) Where the waters are to be suitable [only] for fish, shellfish, and wildlife survival, Aquatic (Acute) standards and guidance values shall apply.

702.9(g) [Where] If the available data are deemed insufficient for deriving a standard or guidance value on the basis of section 706.1 of this Title, a value may be based on either:

(1) an alternative procedure if deemed appropriate based on scientific evidence; or

(2) correlation to a chemical for which a standard or guidance value has been established pursuant to [that] section 706.1 of this Title [where] if similar toxic effects are anticipated because of similarity of functional groups or metabolic or toxicologic pathways.

Nothing else in existing section 702.9 is changed.

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New section 702.12 is ADOPTED to read as follows:

702.12 Procedures for deriving standards and guidance values for protection of recreation.

(a) Protection of the best usage of recreation shall include standards and guidance values to protect the quality of the water for primary and secondary contact recreation, including aesthetic conditions. Such values are referred to as Recreation values and derived based on an evaluation of reported levels of the pollutant (such as pathogens or pathogen indicators, nutrients or vegetation) that affect the quality of the water and its suitability for primary and secondary contact recreation.

Existing section 702.14 is REPEALED and new section 702.14 is ADOPTED to read as follows:

702.14 Procedures for deriving standards and guidance values for protection of aesthetic quality.

(a) Protection of the best usage as a source of potable water supply shall include standards and guidance values to protect the aesthetic quality of the water, including but not limited to taste, odor, and discoloration, both as a source of potable water and for other human uses such as clothes washing and showering. Such values are referred to as Aesthetic (Water Source) values and shall be derived based on an evaluation of reported levels of the substance that affect the aesthetic quality of the water. Values derived shall not exceed the value of a Specific MCL that is based on aesthetic considerations.

(b) Protection of the best usage of fishing shall include standards and guidance values to prevent tainting of aquatic food, including but not limited to taste, odor, and discoloration. Such values are referred to as Aesthetic (Food Source) values and derived based on an evaluation of reported levels of the substance that affect the aesthetic quality of the fish flesh, aquatic life, wildlife, or livestock that are consumed by humans and that acquire such flavor, odor, or color because of habitation in, passage through, or ingestion of waters.

(c) If the available data are deemed insufficient for deriving a value based on subdivision (a) or (b) of this section, a value may be established based on chemical correlation to a chemical for which a standard or guidance value has been established pursuant to that subdivision, if similar aesthetic considerations are anticipated because of similarity of functional groups or metabolic or toxicologic pathways.

Existing subdivision 702.15(a) is AMENDED to read as follows:

702.15(a) For those substances that do not have an applicable Health (Water Source) standard in section 703.5 of this Title and that the department determines may pose a threat to human health if discharged to the waters of the State, a guidance value may be derived and shall be the [more] most stringent of the following:

(1) the values derived by applying the procedures from sections 702.3 through 702.7 of this Part; [or]

(2) a "general organic guidance value" of 50 ug/L for an individual organic substance. This paragraph does not apply if adequate and sufficient data are available to justify values greater than

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50 ug/L using procedures from both sections 702.4 and 702.5 of this Part. The general organic guidance value applies only to those substances specified by the department; or

(3) a "specific organic mixture guidance value" of 100 ug/L for a commercially available mixture of individual organic substances. This paragraph does not apply if adequate and sufficient data are available to justify values greater than 100 ug/L using procedures from both sections 702.4 and 702.5 of this Part. The derivation of this value for any specified mixture does not preclude the existence or derivation of a Health (Water Source) standard or guidance value for any individual organic substance in the mixture. The specific organic mixture guidance value applies only to those mixtures specified by the department.

Existing subdivision 702.15(f) is AMENDED to read as follows:

702.15(f) For those substances that do not have an applicable Aesthetic (Water Source) standard in section 703.5 of this Title and that the department determines may pose a threat to the aesthetic quality of sources of potable water [or food for human consumption] if discharged to the waters of the State, a guidance value may be derived by applying the appropriate procedure from section 702.14 of this Part.

New subdivision 702.15(g) is ADOPTED to read as follows:

702.15(g) For those substances that do not have an applicable Aesthetic (Food Source) standard in section 703.5 of this Title and that the department determines may pose a threat to the aesthetic quality of food for human consumption if discharged to the waters of the State, a guidance value may be derived by applying the appropriate procedure from section 702.14 of this Part.

New subdivision 702.15(h) is ADOPTED to read as follows:

702.15(h) For those parameters that do not have an applicable Recreation standard in section 703.5 of this Title and that the department determines may pose a threat to the quality of the water for recreation if discharged to the waters of the State, a guidance value may be derived by applying the appropriate procedure from section 702.12 of this Part.

Nothing else in existing section 702.15 is changed.

Existing paragraph 702.16(b)(1) is AMENDED to read as follows:

702.16(b)(1) When deriving a water quality-based effluent limitation from a surface water standard or guidance value, the department may take into account factors, including but not limited to analytical detectability, treatability, natural background levels, intermittent streamflow, wet weather events, and the waste assimilative capacity of the receiving waters.

Nothing else in existing section 702.16 is changed.

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PART 703

In existing section 703.2, the entry for the parameter “Turbidity” is AMENDED to read:

PARAMETER	CLASSES	STANDARD
Turbidity	AA, A, B, C, D, SA, SB, SC, I, SD, <u>A-Special</u>	No increase that will cause a substantial visible contrast to natural conditions.

To existing section 703.2, a new entry, for the parameter “Flow,” is ADOPTED and added, to be located at the end of the section, after the parameter “Thermal discharges.”

PARAMETER	CLASSES	STANDARD
<u>Flow</u>	<u>AA, A, B, C, D, A-Special</u>	<u>No alteration that will impair the waters for their best usages.</u>

Nothing else within existing section 703.2 is changed.

In existing section 703.3, the existing entry for the parameter “Dissolved oxygen (DO)” is AMENDED to read as follows:

PARAMETER	CLASSES	STANDARD
Dissolved oxygen (DO)	A-Special	In rivers and upper waters of lakes, not less than 6.0 mg/L at any time. In hypolimnetic waters, it should not be less than necessary for the support of fishlife, particularly cold water species.

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PARAMETER	CLASSES	STANDARD
	AA, A, B, C, AA-Special	[For cold waters suitable for trout spawning,] <u>For trout spawning waters (TS)</u> the DO concentration shall not be less than 7.0 mg/L from other than natural conditions. For trout waters <u>(T)</u> , the minimum daily average shall not be less than 6.0 mg/L, and at no time shall the concentration be less than 5.0 mg/L. For nontrout waters, the minimum daily average shall not be less than 5.0 mg/L, and at no time shall the DO concentration be less than 4.0 mg/L.
	D[, SD]	Shall not be less than 3.0 mg/L at any time.
	[SA, SB, SC]	[Shall not be less than 5.0 mg/L at any time.]
	<u>SA, SB, SC</u>	<u>Chronic: Shall not be less than a daily average of 4.8 mg/L*</u>

Remark: *The DO concentration may fall below 4.8 mg/L for a limited number of days, as defined by the formula:

$$DO_i = \frac{13.0}{2.80 + 1.84e^{-0.1t_i}} \quad \text{where } DO_i = \text{DO}$$

concentration in mg/L between 3.0 - 4.8 mg/L and t_i = time in days. This equation is applied by dividing the DO range of 3.0 - 4.8 mg/L into a number of equal intervals. DO_i is the lower bound of each interval (i) and t_i is the allowable number of days that the DO concentration can be within that interval. The actual number of days that the measured DO concentration falls within each interval (i) is divided by the allowable number of days that the DO can fall within interval (t_i). The sum of the quotients of all intervals (i ...n) cannot exceed 1.0: i.e.,

$$\sum_{i=1}^n \frac{t_i(\text{actual})}{t_i(\text{allowed})} < 1.0$$

. The DO concentration shall not fall

below the acute standard of 3.0 mg/L at any time.

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PARAMETER	CLASSES	STANDARD
	<u>SA, SB, SC, SD</u>	<u>Acute: Shall not be less than 3.0 mg/L at any time.</u>
	I	Shall not be less than 4.0 mg/L at any time.

Nothing else within existing section 703.3 is changed.

Existing subdivision 703.4(c) is REPEALED and new subdivision 703.4(c) is ADOPTED to read as follows:

703.4(c) The total and fecal coliform standards for classes B, C, D, SB, SC, and I shall be met during all periods:

(1) when disinfection is required for SPDES permitted discharges directly into, or affecting the best usage of, the water; or

(2) when the department determines it necessary to protect human health.

Nothing else within existing section 703.4 is changed.

Existing subdivision 703.5(b) is AMENDED to read as follows:

703.5(b) Standards are Health (Water Source), Health (Fish Consumption), Aquatic (Chronic), Aquatic (Acute), Wildlife [or Aesthetic], Aesthetic (Water Source), Aesthetic (Food Source), or Recreation based and are respectively designated as H(W.S), H(FC), A(C), A(A), W [or E], E(W.S), E(FS), or R in the column headed "Type." Where more than one Type of standard is listed for a water class, the most stringent applies.

Existing subdivisions 703.5(a), (c), (d), and (e) are unchanged.

New entries for the following substances are ADOPTED and added to existing Table 1 of existing subdivision 703.5(f) IN ALPHABETICAL ORDER within Table 1, to read as follows:

SUBSTANCE (CAS NO.)	WATER CLASSES	STANDARD (ug/L)	TYPE	BASIS CODE
<u>Acetaldehyde (75-07-0)</u>	<u>A, A-S, AA, AA-S</u> <u>GA</u>	<u>8</u> <u>8</u>	<u>H(W.S)</u> <u>H(W.S)</u>	<u>A</u> <u>A</u>
<u>Carbon disulfide (75-15-0)</u>	<u>A, A-S, AA, AA-S</u> <u>GA</u>	<u>60</u> <u>60</u>	<u>H(W.S)</u> <u>H(W.S)</u>	<u>B</u> <u>B</u>

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<u>Formaldehyde</u> <u>(50-00-0)</u>	<u>A, A-S, AA, AA-S</u> <u>GA</u>	<u>8</u> <u>8</u>	<u>H(WS)</u> <u>H(WS)</u>	<u>A</u> <u>A</u>
<u>Metolachlor</u> <u>(51218-45-2)</u>	<u>A, A-S, AA, AA-S</u> <u>GA</u>	<u>10</u> <u>10</u>	<u>H(WS)</u> <u>H(WS)</u>	<u>A</u> <u>A</u>

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Existing entries in Table 1 of existing subdivision 703.5(f) for the following substances are AMENDED to read as follows:

NOTE: The material in italics below in the entry for "Pentachlorophenol" is NOT being deleted. The brackets in the "Remarks" section of that entry should remain in the text. The italics are only used to indicate what material this note refers to.

SUBSTANCE (CAS NO.)	WATER CLASSES	STANDARD (ug/L)	TYPE	BASIS CODE
Acenaphthene (83-32-9)	A, A-S, AA, AA-S	20	E(<u>WS</u>)	U
Aminocresols (95-84-1; 2835-95-2; 2835-99-6)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, <u>D</u> [D]	* * ** [**]	E(<u>WS</u>) E(<u>WS</u>) E(<u>FS</u>) [E]	
Remarks:	* Refer to standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenols, total unchlorinated."			
Ammonia and Ammonium (7664-41-7; CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C D <u>SA, SB, SC, I</u> <u>SA, SB, SC, I, SD</u>	2,000* 2,000* ** ** <u>35***</u> <u>230***</u>	H(<u>WS</u>) H(<u>WS</u>) A(C) A(A) A(C) A(A)	H H
Remarks:	* NH ₃ + NH ₄ ⁺ as N. ** Un-ionized ammonia as NH ₃ ; tables below provide the standard in ug/L at varying pH and temperature for different classes and specifications. Linear interpolation between the listed pH values and temperatures is applicable. *** <u>Applies to un-ionized ammonia as NH₃.</u>			
The remainder of the entry for "Ammonia and Ammonium" is not changed.				
Chlorobenzene (108-90-7)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D SA,SB, SC, I, SD A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S D	5 * 400 400 5 20 50	H(<u>WS</u>) H(<u>WS</u>) H(<u>FC</u>) H(<u>FC</u>) A(C) E(<u>WS</u>) E(<u>FS</u>)	I J B B U U V
Remark:	* The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.			
2-Chloronaphthalene (91-58-7)	A, A-S, AA, AA-S	10	E(<u>WS</u>)	U

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SUBSTANCE (CAS NO.)	WATER CLASSES	STANDARD (ug/L)	TYPE	BASIS CODE
Dichlorobenzenes (95-50-1;541-73-1;106-47-6)	A, A-S, AA, AA-S	3*	H(WS)	A
	GA	3*	H(WS)	A
	A, A-S, AA, AA-S, B, C	5**	A(C)	
	A, A-S, AA, AA-S	20***/30****	<u>E(WS)</u>	U
	D	50**	<u>E(FS)</u>	V
Remarks:	* Applies to each isomer (1,2-,1,3- and 1,4-dichlorobenzene) individually. ** Applies to the sum of 1,2-, 1,3- and 1,4-dichlorobenzene. For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15(c) of this Title. *** Applies to 1,3-dichlorobenzene only. **** Applies to 1,4-dichlorobenzene only.			
2,4-Dichlorophenol (120-83-2)	A, A-S, AA, AA-S	0.3*	<u>E(WS)</u>	U
	GA	**	<u>E(WS)</u>	
	A, A-S, AA, AA-S, B, C, D	***	<u>E(FS)</u>	
Remarks:	* Also see standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenolic compounds (total phenols)." *** Refer to standards for "Phenols, total chlorinated."			
2,4-Dimethylphenol (105-67-9)	A, A-S, AA, AA-S, B, C, D	1,000	H(FC)	B
	SA, SB, SC, I, SD	1,000	H(FC)	B
	A, A-S, AA, AA-S	*	<u>E(WS)</u>	
	GA	*	<u>E(WS)</u>	
	<u>A, A-S, AA, AA-S, B, C, D</u>	**	<u>E(FS)</u>	
Remarks:	* Refer to standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenols, total unchlorinated."			
2,4-Dinitrophenol (51-28-5)	A, A-S, AA, AA-S, B, C, D	400	H(FC)	B
	SA, SB, SC, I, SD	400	H(FC)	B
	A, A-S, AA, AA-S	*	<u>E(WS)</u>	
	GA	*	<u>E(WS)</u>	
	<u>A, A-S, AA, AA-S, B, C, D</u>	**	<u>E(FS)</u>	
Remarks:	* Refer to standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenols, total unchlorinated."			

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SUBSTANCE (CAS NO.)	WATER CLASSES	STANDARD (ug/L)	TYPE	BASIS CODE
Foaming agents (CAS No. Not Applicable)	GA	500*	E(<u>WS</u>)	U
Remark:	* Determined as methylene blue active substances (MBAS) or by other tests as specified by the commissioner.			
Hexachlorocyclopentadiene (77-47-4)	GA A, A-S, AA, AA-S, B, C D SA, SB, SC SD A, A-S, AA, AA-S	* 0.45** 4.5** 0.07 0.7 1.0	H(<u>WS</u>) A(C) A(A) A(C) A(A) E(<u>WS</u>)	J U
Remarks:	* The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance. ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15(c) and (d) of this Title.			
Hexachlorophene (70-30-4)	GA A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D	* ** ** ***	H(<u>WS</u>) E(<u>WS</u>) E(<u>WS</u>) E(<u>FS</u>)	J
Remarks:	* The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance. ** Refer to standards for "Phenolic compounds (total phenols)." *** Refer to standards for "Phenols, total chlorinated."			
Hydroquinone (123-31-9)	A, A-S, AA, AA-S, B, C D A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D	2.2** 4.4** * * ***	A(C) A(A) E(<u>WS</u>) E(<u>WS</u>) E(<u>FS</u>)	
Remarks:	* Refer to standards for "Phenolic compounds (total phenols)." ** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15(c) and (d) of this Title. *** Refer to standards for "Phenols, total unchlorinated."			
Iron (CAS No. Not Applicable)	[A, A-S, AA, AA-S, B, C] [D] A, A-S, AA, AA-S GA	[300**] [300**] 300 300*	[A(C)] [A(A)] E(<u>WS</u>) E(<u>WS</u>)	G F

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SUBSTANCE (CAS NO.)	WATER CLASSES	STANDARD (ug/L)	TYPE	BASIS CODE
Remark[s] * Also see standard for "Iron and Manganese." [** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15(c) and (d) of this Title.]				
Iron and Manganese (CAS No. Not Applicable)	GA	500*	E(<u>WS</u>)	F
Remark:	* Applies to the sum of these substances; also see individual standards for "Iron" and "Manganese."			
Manganese (CAS No. Not Applicable)	A, A-S, AA, AA-S GA	300 300*	E(<u>WS</u>) E(<u>WS</u>)	G F
Remark:	* Also see standards for "Iron and Manganese."			
Naphthalene (91-20-3)	A, A-S, AA, AA-S	10	E(<u>WS</u>)	U
Nitrite (expressed as N) (CAS No. Not Applicable)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C	1,000* 1,000* **	H(<u>WS</u>) H(<u>WS</u>) A(C)	G G
Remark	* Also see standards for "Nitrate and Nitrite." ** Standard is 100 ug/L [for warm water fishery waters and] <u>except</u> 20 ug/L for [cold water fishery waters.] <u>trout waters (T or TS)</u> . *** For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15(c) of this Title.			
Nitrobenzene (98-95-3)	A, A-S, AA, AA-S GA A, A-S, AA, AA-S	0.4 0.4 30	H(<u>WS</u>) H(<u>WS</u>) E(<u>WS</u>)	A A U
Pentachlorophenol (87-86-5)	A, A-S, AA, AA-S, B, C A, A-S, AA, AA-S, B, C, D A, A-S, AA, AA-S GA A, A-S, AA, AA-S, B, C, D	* ** *** *** ****	A(C) A(A) E(<u>WS</u>) E(<u>WS</u>) E(<u>FS</u>)	
Remarks:	* exp [1.005 (pH) - 5.134] ** exp [1.005 (pH) - 4.869] *** Refer to standards for "Phenolic compounds (total phenols)." **** Refer to standards for "Phenols, total chlorinated."			

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SUBSTANCE (CAS NO.)	WATER CLASSES	STANDARD (ug/L)	TYPE	BASIS CODE
Phenol (108-95-2)	A, A-S, AA, AA-S	*	<u>E(WS)</u>	
	GA	*	<u>E(WS)</u>	
	A, A-S, AA, AA-S, B, C, D	**	<u>E(FS)</u>	
Remarks:	* Refer to standards for "Phenolic compounds (total phenols)." ** Refer to standards for "Phenols, total unchlorinated."			
Phenolic compounds (total phenols) (CAS No. Not Applicable)	A, A-S, AA, AA-S	1*	<u>E(WS)</u>	U
	GA	1*	<u>E(WS)</u>	U
Remark:	* Applies to the sum of these substances.			
Phenols, total chlorinated (CAS No. Not Applicable)	A, A-S, AA, AA-S	*	<u>E(WS)</u>	
	GA	*	<u>E(WS)</u>	
	A, A-S, AA, AA-S, B, C, D	1.0**	<u>E(FS)</u>	V
Remarks:	* Refer to standards for "Phenolic compounds (total phenols)." ** Applies to the sum of these substances.			
Phenols, total unchlorinated (CAS No. Not Applicable)	A, A-S, AA, AA-S	*	<u>E(WS)</u>	
	GA	*	<u>E(WS)</u>	
	A, A-S, AA, AA-S, B, C, D	5.0**	<u>E(FS)</u>	V
Remarks:	* Refer to standards for "Phenolic compounds (total phenols)." ** Applies to the sum of these substances.			
Phenyl ether (101-84-8)	A, A-S, AA, AA-S	10	<u>E(WS)</u>	U
Styrene (100-42-5)	GA	*	H(WS)	J
	A, A-S, AA, AA-S	50	<u>E(WS)</u>	U
Remark:	* The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to this substance.			
Tetrachlorobenzenes (634-66-2; 634-90-2; 95-94-3; 12408-10-5)	GA	*	H(WS)	J
	A, A-S, AA, AA-S	10**	<u>E(WS)</u>	U

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SUBSTANCE (CAS NO.)	WATER CLASSES	STANDARD (ug/L)	TYPE	BASIS CODE
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Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each isomer (1,2,3,4-, 1,2,3,5-, and 1,2,4,5- tetrachlorobenzene) individually.

** Applies to the sum of 1,2,3,4-, 1,2,3,5- and 1,2,4,5-tetrachlorobenzene.

Trichlorobenzenes (87-61-6; 120-82-1; 108-70-3; 12002-48-1)	GA	*	H(WS)	J
	A, A-S, AA, AA-S, B, C	5**	A(C)	
	SA, SB, SC	5**	A(C)	
	A, A-S, AA, AA-S	10**	E(WS)	U
	D	50**	E(FS)	V
	SD	50**	E(FS)	V

Remarks: * The principal organic contaminant standard for groundwater of 5 ug/L (described elsewhere in this Table) applies to each isomer (1,2,3-, 1,2,4- and 1,3,5- trichlorobenzene) individually.

** Applies to the sum of 1,2,3-, 1,2,4- and 1,3,5-trichlorobenzene. For the waters of the Great Lakes System, the department will substitute a guidance value for the aquatic Type standard if so determined under section 702.15(c) of this Title.

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Nothing else within existing Table 1 of existing subdivision 703.5(f) is changed.

The existing entry for Basis Code “V” in Table 2 of subdivision 703.5(f) is AMENDED to read as follows:

BASIS CODE	BASIS
V	[Aquatic Life] <u>Food Source</u> , Aesthetics

Nothing else within existing Table 2 of existing subdivision 703.5(f) is changed.

New entries for the following substances are ADOPTED and added to existing Table 3 of subdivision 703.6(e) IN ALPHABETICAL ORDER to read as follows:

SUBSTANCE	CAS NO.	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)
<u>Acetaldehyde</u>	<u>75-07-0</u>	<u>8</u>
<u>Carbon disulfide</u>	<u>75-15-0</u>	<u>120</u>
<u>Formaldehyde</u>	<u>50-00-0</u>	<u>8</u>
<u>Metolachlor</u>	<u>51218-45-2</u>	<u>10</u>

Existing entries for the following substances in existing Table 3 of subdivision 703.6(e) are AMENDED to read as follows:

SUBSTANCE	CAS NO.	MAXIMUM ALLOWABLE CONCENTRATION (ug/L)
Copper	Not Applicable	[1,000] <u>400</u>
Styrene	100-42-5	[930] <u>5</u>

The existing entry in Table 3 of subdivision 703.6(e) for “Chlorinated dibenzo-p-dioxins and Chlorinated dibenzofurans” is relocated, unchanged, from its existing location to its proper alphabetical location to immediately follow the existing entry for “Chloride.”

Nothing else within existing Table 3 of subdivision 703.6(e) is changed.

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PART 704

Existing paragraph 704.2(b)(2) is AMENDED to read as follows:

704.2(b)(2) Trout waters (T or TS).

Nothing else in existing section 704.2 is changed.