Interstate Water Quality Standards Matrix

Class AA Waters

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Aesthetics	All waters free from substances attributable to wastewater or other discharges that: settle to form objectionable deposits; float as debris, scum, oil, or other matter to form nuisances; produce objectionable color, odor, taste, or turbidity; injure or are toxic or produce adverse physiological responses in humans, animals or plants; and produce undesirable or nuisance aquatic life.	Uniformly Excellent.	No such classification.	N/A	No such classification.	No taste, odor, or odor-producing, toxic, or other deleterious substances in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. See section 703.5, table 1 in the Regulation for standards for specific substances.	No such classification.	No such classification.
Aquatic Life	N/A	No discharges in concentrations or combinations as to adversely effect aquatic life.	No such classification.	As naturally occurs.	No such classification.	See section 703.5, table 1 for standards for specific substances.	No such classification.	No such classification.
Benthic Invertebrates	N/A	A wide variety of macroinvertebrate taxa should be normally present and all functional feeding groups should normally be well represented. Water quality shall be sufficient to sustain a diverse macroinvertebrate community of indigenous species.	No such classification.	N/A	No such classification.	N/A	No such classification.	No such classification.
Dissolved Oxygen (DO)	**Cold Water Criteria**: 30 day mean 6.5 mg/l. **Warm Water Criteria**: 30 day mean 5.5 mg/l.	Not less than 5 mg/l at any time.	No such classification.	As naturally occurs.	No such classification.	For cold waters suitable for trout spawning, the dissolved oxygen concentration shall not be less than 7.0 mg/l from other than natural conditions. For trout waters, 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 non trout waters the minimum daily average shall not be less than 5.0 mg/l and at no time shall the dissolved oxygen be less than 4.0 mg/l.	No such classification.	No such classification.
Sludge Deposits, Solid Refuse, Floating Solids, Oil, Grease and Scum	**For domestic water supply**: Virtually free from oil and grease, particularly from the tastes and odors that emanate from petroleum products. **For aquatic life**: (1) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater or marine species, (2) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed, (3) Surface waters shall be virtually free from floating non-petroleum oils of vegetable or animal origin, as well as petroleum derived oils.	None other than of natural origin.	No such classification.	Waters shall be free from floating substances that impair the characteristics and designated uses ascribed to their class.	No such classification.	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film or globules of grease.	No such classification.	No such classification.
Color and Turbidity	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity. **Color**: Waters shall be virtually free from substances producing objectionable color for aesthetic purposes; the source of supply should not exceed 75 color units for domestic water supplies; increased color should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from seasonally established norm for aquatic life.	**Color** - None other than of natural origin. **Turbidity** - Shall not exceed 5 NTU over ambient levels and none exceeding levels necessary to protect and maintain all designated uses (BMPs are to be used).	No such classification.	N/A	No such classification.	**Color**: None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages. **Turbidity** - No increase that will cause a substantial visible contrast to natural conditions.	No such classification.	No such classification.
Bacteria (Count/100ml)	**For bathing water**: the geometric mean of the indicated bacterial densities should not exceed one or the other of the following: E. coli 126/100ml; or enterococci 33/100ml.	**Total Coliform**: Drinking water: Monthly moving average less than 100/100 ml, Single sample maximum 500/100 ml; **E. coli**: Designated swimming: Geometric mean less than 126/100 ml, Single sample maximum 235/100 ml; Non-designated swimming: Geometric mean less than 126/100 ml, Single sample maximum 410/100 ml; All other recreational uses: Geometric mean less than 126/100 ml, Single sample maximum 576/100 ml.	No such classification.	As naturally occurs.	No such classification.	**Total Coliforms:** The monthly median value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 50/100 ml and 240/100 ml, respectively.	No such classification.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Taste and Odor	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity.	None other than natural origin.	No such classification.	N/A	No such classification.	None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.	No such classification.	No such classification.
pH	**Aquatic Life**: 6.5-9; **Domestic Water Supplies**: 5-9	As naturally occurs.	No such classification.	6.0 - 8.5	No such classification.	Shall not be less than 6.5 nor more than 8.5	No such classification.	No such classification.
Temperature	For any time of year, there are two upper limiting temperatures for a location (based on the important sensitive species found there at that time): (1) One limit consists of a maximum temperature for short exposures that is time dependent and is given by a species-specific equation; (2) the second value is a limit on the weekly average temperature (see Gold Book).	There shall be no changes from natural conditions that would impair any existing or designated uses assigned to this Class and, in no case exceed 85 degrees F, or in any case raise the temperature of surface water more than 4 degrees F.	No such classification.	As naturally occurs.	No such classification.	All thermal discharges to the waters of the State shall assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. The natural seasonal temperature cycle shall be retained. Annual spring and fall temperature changes shall be gradual. Large day-to-day temperature fluctuations due to heat of artificial origin shall be avoided. Detailed criteria for specific types of waters are given in Part 704 of the Regulation.	No such classification.	No such classification.
Silt or Sand Deposits	N/A	None other than of natural origin except as may result form normal agricultural, road maintenance, construction activity or dredging activity, or discharge of dredged or fill materials provided all reasonable controls or BMPs are used.	No such classification.	N/A	No such classification.	N/A	No such classification.	No such classification.
Chemical Constituents	N/A	None in concentrations or combinations which would be harmful to designated uses. Refer to Standards #s 10, 11, 12, 13, 17, and 19.	No such classification.	N/A	No such classification.	None in amounts that will adversely affect the taste, color, odor or impair the waters for their best use. See part 703.5, table 1 of the Regulation for standards for specific substances.	No such classification.	No such classification.
Phosphorus	0.10 µg/l	**Oligotrophic lakes:** 0-10 µg/l in spring and summer. **Mesotrophic lakes:** 10-30 µg/l in spring and summer. **Eutrophic lakes:** 30-50 µg/l in spring and summer. **Highly eutrophic lakes:** 50+ µg/l in spring and summer.	No such classification.	N/A	No such classification.	None in amounts that will result in growth of algae, weeds and slimes that will impair the waters for their best usage.	No such classification.	No such classification.
Sodium	N/A	Not to exceed 20mg/l.	No such classification.	N/A	No such classification.	N/A	No such classification.	No such classification.
Chlorides	860,000 µg/l max. concentration; 230,000 µg/l continuous concentration.	N/A	No such classification.	Maximum concentration of 860,000 µg/l; continuous concentration of 230,000 µg/l	No such classification.	250 mg/l	No such classification.	No such classification.
Sulfates	250,000 µg/l	N/A	No such classification.	N/A	No such classification.	250 mg/l	No such classification.	No such classification.
Nitrate - N	10,000 µg/l	N/A	No such classification.	**For human health:** 10,000 µg/l for consumption of water and organisms.	No such classification.	None in amounts that will result in growth of algae, weeds and slimes that will impair the waters for their best use. Also 10 mg/l limit.	No such classification.	No such classification.
Phenol	21,000 µg/l (human health for consumption of water and organism).	**For human health**: 4600 mg/l for consumption of organisms and 21 mg/l for consumption of water and organisms.	No such classification.	Maximum concentration of 10,200 µg/l; continuous concentration of 2,560 µg/l. For human health: 21,000 µg/l for consumption of water and organisms and 460,000 µg/l for consumption of organisms.	No such classification.	Total phenols 1 µg/l	No such classification.	No such classification.
Total Dissolved Solids	250,000 µg/l (human health for consumption of water and organism).	N/A	No such classification.	N/A	No such classification.	Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/l.	No such classification.	No such classification.
Substances Potentially Toxic	N/A	Surface waters shall be free from chemical constituents in concentrations or combinations which will or can reasonably be expected to result in acute or chronic toxicity to aquatic organisms.	No such classification.	No toxics in toxic amounts	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See Table 1 of part 703.5 of the Regulation for specific standards.	No such classification.	No such classification.
Radioactivity	N/A	Discharge of radioactive materials in concentrations or combinations which would be harmful to human, animal or aquatic life shall not be allowed. Applicable criteria can be found in Title10 Part 20 of the Code of Federal Regulations.	No such classification.	N/A	No such classification.	See standards for gross beta radiation, radium 226, and strontium 90.	No such classification.	No such classification.
Gross Beta	N/A	N/A	No such classification.	N/A	No such classification.	1000 PCI/l, excluding Sr-90 and alpha-emitters.	No such classification.	No such classification.
Radium 226	N/A	N/A	No such classification.	N/A	No such classification.	3 PCI/L	No such classification.	No such classification.
Strontium 90	N/A	N/A	No such classification.	N/A	No such classification.	8 PCI/L	No such classification.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Mixing Zones	Quality for life within a mixing zone should be such that the 96- hour LC50 for biota significant to the indigenous aquatic community is not exceeded; the mixing zone should be free from effluent substances that will settle to form objectionable deposits free from effluent-associated materials that float to form unsightly masses, and free from effluent-associated substances that produce objectionable color, odor, or turbidity.	Established on a case by case basis. Based on characteristics of the receiving waterbody, including sensitivity, and aquatic life. Refer to Standard # 10.	No such classification.	N/A	No such classification.	**For thermal mixing zones**: the department shall specify definable, numerical limits for all mixing zones. Conditions in the mixing zone shall not be lethal in contravention of water quality standards to aquatic biota which may enter the zone. The location of mixing zones for thermal discharges shall not interfere with spawning areas, nursery areas, and fish migration routes. **For non-thermal mixing zones**: Within mixing zones, water quality standards for pollutants are expected to be exceeded, potentially impairing habitat usability for fish and benthic communities. Detailed guidelines can be found in TOGS 1.3.1	No such classification.	No such classification.
Class A Waters								
Aesthetics	All waters free from substances attributable to wastewater or other discharges that: settle to form objectionable deposits; float as debris, scum, oil, or other matter to form nuisances; produce objectionable color, odor, taste, or turbidity; injure or are toxic or produce adverse physiological responses in humans, animals or plants; and produce undesirable or nuisance aquatic life.	Uniformly Excellent.	All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste, or turbidity, or produce undesirable or nuisance species. Class A waters shall have excellent aesthetic value.	N/A	All waters shall be free from substances in kind or quantity which: float as foam, debris, scum or other visible substances; produce odor, color, taste or turbidity which is not naturally occurring and would render it unsuitable for its designated use; result in the dominance of nuisance; or interfere with recreational uses. Shall contain no turbidity, slicks, odors, or surface floating solids unless naturally occurring.	No taste, odor, or odor-producing, toxic, or other deleterious substances in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. See section 703.5, table 1 in the Regulation for standards for specific substances.	All waters shall be free from pollutants in concentrations or combinations that: Settle to form deposits that are unsightly, putrescent, or odorous; Float as debris, oil, grease, scum or other floating material attributable to wastes; Produce odor or taste or change the color or physical, chemical or biological conditions; or Result in the dominance of species of fish and wildlife; To such a degree as to create a nuisance or interfere with the existing or designated uses.	(**A1**) - In their natural condition. (**A2**) - Consistently exhibiting excellent aesthetic value.
Aquatic Life	N/A	No discharges in concentrations or combinations as to adversely effect aquatic life.	N/A	As naturally occurs.	All surface waters shall provide, wherever attainable, for the protection and propagation of fish, shellfish and wildlife. The surface waters shall support and maintain a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of region. Differences from naturally occurring conditions shall be limited to non-detrimental differences in community structure and function. Unless flows are caused by naturally occurring conditions, surface water quantity shall be maintained at levels adequate to protect existing and designated uses, and to maintain the chemical, physical and biological integrity of surface waters.	See section 703.5, table 1 for standards for specific substances.	At a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that: adversely affect the composition of fish and wildlife; adversely affect the physical, chemical, or biological integrity of the habitat; interfere with the propagation of fish and wildlife; or adversely alter the life cycle functions, uses, processes and activities of fish and wildlife.	(**A1**) - Change from the natural condition limited to minimal impacts from human activity. Measures of biological integrity for aquatic macroinvertebrates and fish assemblages are within the range of the natural condition. Uses related to either the physical, chemical, or biological integrity of the aquatic habitat or the composition or life cycle functions of aquatic biota or wildlife are fully supported. All life cycle functions are maintained and protected. (**A2**) - Biological integrity is maintained, no change from the reference condition that would prevent the full support of aquatic biota, wildlife or aquatic habitat uses. Change from the reference condition for aquatic macroinvertebrates and fish assemblages shall not exceed moderate changes in the relative proportions of taxonomic, functional, tolerant and intolerant components. All expected functional groups are present in a high quality habitat and none shall be eliminated. All life cycle functions are maintained and protected. Changes in the aquatic habitat shall not exceed moderate differences from the reference condition consistent with the full support of all aquatic biota and wildlife uses.
Benthic Invertebrates	N/A	A wide variety of macroinvertebrate taxa should be normally present and all functional feeding groups should normally be well represented. Water quality shall be sufficient to sustain a diverse macroinvertebrate community of indigenous species.	N/A	N/A	All surface waters shall provide, wherever attainable, for the protection and propagation of fish, shellfish and wildlife. The surface waters shall support and maintain a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of region. Differences from naturally occurring conditions shall be limited to non-detrimental differences in community structure and function. All surface waters shall be free from substances in kind or quantity that result in the dominance of nuisance species.	N/A	N/A	N/A

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Dissolved Oxygen (DO)	**Cold Water Criteria**: 30 day mean 6.5mg/l. **Warm Water Criteria**: 30 day mean 5.5 mg/l.	Not less than 5 mg/l at any time.	Not less than 6mg/l unless background conditions are lower. Natural seasonal and daily variations above this level shall be maintained; levels shall not be lowered below 75% saturation due to a discharge. Site-specific criteria may apply where background levels are lower than specified levels or to the hypolimnion of stratified lakes where the Department determines that designated uses are not impaired.	Not less than 7 ppm or 75% saturation, whichever is higher.	Shall have a dissolved oxygen content of at least 75% saturation, based on a daily average, and an instantaneous amount of at least 6.0 mg/l at any place or time except as naturally occurs. For the period from October 1st to May 14th, in areas identified by the fish and game department as cold water fish spawning areas of species whose early life stages are not directly exposed to the water, the 7 day mean dissolved oxygen concentration shall be at least 9.5 mg/l and the instantaneous minimum dissolved oxygen concentration shall be at least 8 mg/l. This period shall be extended to June 30 for a particular waterbody if the fish and game department determines it is necessary to protect spring spawners and late hatches of fall spawners.	For cold waters suitable for trout spawning, the dissolved oxygen concentration shall not be less than 7.0 mg/l from other than natural conditions. For trout waters, 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 non trout waters the minimum daily average shall not be less than 5.0 mg/l and at no time shall the dissolved oxygen be less than 4.0 mg/l. For 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.	**Cold Water Fish Habitat**- Dissolved oxygen content of not less than 75% saturation, based on daily average, and instantaneous minimum concentration of 5mg/l. From October 1-May 14 in designated cold water fish spawning areas the following criteria apply: For species with early life stages not exposed to the water column, the 7 day mean dissolved oxygen shall not be less than 9.5mg/l and the instantaneous minimum dissolved oxygen shall not be less than 8mg/l. For species with early life stages exposed to the water column, the 7 day mean dissolved oxygen shall not be less than 6.5 mg/l and the instantaneous minimum dissolved oxygne shall not be less than 5.0mg/l. **For Warm Water Fish Habitat:** the dissolved oxygen shall not be less than 60% based on daily avgerage and an instantaneous minimum dissolved oxygen concentration shall not be less than 5 mg/l. The 7 day mean water column dissolved oxygen concentration shall not be less than 6 mg/l.	Class A(1) Ecological Waters: As exists in their natural condition. Class A(2) Public Water Supplies: **Cold Water Fish Habitat** - Not < 7mg/l and 75% saturation at all times, nor < 95% saturation during late egg maturation and larval development of salmonids in areas that the secretary determines are salmon spawning or nursery areas important to the fishery resource. Not < 6 mg/l and 70% saturation at all times in all other waters designated as a cold water fishery. **Warm Water Fish Habitat:** Not < 5 mg/l and 60% saturation at all times.
Sludge Deposits, Solid Refuse, Floating Solids, Oil, Grease and Scum	**For domestic water supply**: Virtually free from oil and grease, particularly from the tastes and odors that emanate from petroleum products. **For aquatic life**: (1) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater or marine species, (2) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed, (3) Surface waters shall be virtually free from floating non-petroleum oils of vegetable or animal origin, as well as petroleum derived oils.	None other than of natural origin.	Free from oil and grease, petrochemicals and other volatile or synthetic organic pollutants. Free from pollutants in concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom.	Waters shall be free from floating substances that impair the characteristics and designated uses ascribed to their class.	Shall contain no oil or grease, slicks, odors, or surface floating solids unless naturally occurring. Shall contain no benthic deposits unless naturally occurring. Shall be free from substances in kind or quantity which settle to form harmful deposits, float as foam, scum or other visible substances, produce odor, color, taste or turbidity which is not naturally occurring and would render it unsuitable for its designated use.	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.	None allowed.	**Sludge Deposits or solid refuse:** None. **Floating solids, oil, grease, and scum:** None in such concentrations of combinations that would prevent the full support of uses.
Color and Turbidity	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity. **Color**: Waters shall be virtually free from substances producing objectionable color for aesthetic purposes; the source of supply should not exceed 75 color units for domestic water supplies; increased color should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from seasonally established norm for aquatic life.	**Color** - None other than of natural origin. **Turbidity** - Shall not exceed 5 NTU over ambient levels and none exceeding levels necessary to protect and maintain all designated uses (BMPs are to be used).	Free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this Class.	No discharge of pollutants that imparts color or turbidity to the water is allowed.	Shall contain no color and or turbidity unless naturally occurring.	**Color**: None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages. **Turbidity** - No increase that will cause a substantial visible contrast to natural conditions.	**Color:** None in such concentrations that would impair any usages specifically assigned to this class. Turbidity: Not to exceed 5 NTU over background.	**Color:** None that would prevent the full support of uses. **Turbidity -** Not to exceed 10 NTU.
Bacteria (Count/100ml)	**For bathing water**, the geometric mean of the indicated bacterial densities should not exceed one or the other of the following: E. coli 126/100ml; or enterococci 33/100ml.	**E. coli: Designated swimming: Geometric mean less than 126/100 ml, Single sample maximum 235/100 ml; Non-designated swimming: Geometric mean less than 126/100 ml, Single sample maximum 410/100 ml; All other recreational uses: Geometric mean less than 126/100 ml, Single sample maximum 576/100 ml.**	**Fecal Coliform:** Shall not exceed an arithmetic mean of 20/100 ml in any representative set of samples, nor shall 10% of samples exceed 100/100 ml.	As naturally occurs.	**E. coli:** Shall contain not more than either a geometric mean based on at least 3 samples obtained over a 60-day period of 47/100 ml, or greater than 153/100 ml in any one sample; and for designated beach areas shall contain not more than a geometric mean based on at least 3 samples obtained over a 60 day period of 47/100 ml, or 88/100 ml in any one sample, unless naturally occurring.	**Total Coliforms:** The monthly median value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 2400/100 ml and 5000/100 ml respectively. **Fecal Coliform**: The monthly geometric mean from a minimum of five examinations shall not exceed 200/100 ml.	**Total Coliform**: Not to exceed a geometric mean value of 100/100 ml and not more than 10% of the samples shall exceed a value of 500/100 ml. **Fecal Coliform**: Not to exceed a geometric mean value of 20/100 ml and not more than 10% of the samples shall exceed a value of 200/100 ml.	**Escherichia coli:** Not to exceed a geometric mean based on at least 3 samples obtained over a 30 day period of 18 organisms/100ml, no single sample above 33 organisms/100 ml. None attributable to the discharge of wastes.
Taste and Odor	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity.	None other than that of natural origin.	None other than of natural origin.	No discharge of pollutants that imparts taste is allowed.	No odors unless naturally occurring and free from taste which is not naturally occurring and would render it unsuitable for its designated uses. Tainting substances shall not be present in concentrations that individually or in combination are detectable by taste and odor tests performed on edible portions of aquatic organisms.	None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.	None other than of natural origin and none associated with nuisance algal species.	None that would prevent the full support of any designated uses or existing use or have an adverse effect on the taste or odor of fish.
pH	**Aquatic Life**: 6.5-9; **Domestic Water Supplies**: 5-9	As naturally occurs.	Shall be in the range of 6.5 - 8.3, should not change more than 0.5 units outside of background range. There shall be no change from background conditions that would impair designated uses.	6.0-8.5	Shall be as naturally occurs.	Shall not be less than 6.5 nor more than 8.5.	6.5-9.0 or as naturally occurs.	Values shall be maintained within the range of 6.5 and 8.5. The change, or rate of change, either upward or downward shall not result in an undue adverse effect on aquatic biota, fish or wildlife.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Alkalinity	20 mg/l as CaCO3 for freshwater aquatic life except where natural conditions are less.	N/A	20 mg/l as CaCO3 for freshwater aquatic life except where natural conditions are less.	N/A	20 mg/l for freshwater chronic aquatic life unless naturally occurring	N/A	N/A	No change from reference conditions that would prevent the full support of the aquatic biota, wildlife, and aquatic habitat use.
Temperature	For any time of year, there are two upper limiting temperatures for a location (based on the important sensitive species found there at that time): (1) One limit consists of a maximum temperature for short exposures that is time dependent and is given by a species-specific equation; (2) the second value is a limit on the weekly average temperature (see Gold Book).	There shall be no changes from natural conditions that would impair any existing or designated uses assigned to this Class and, in no case exceed 85 degrees F, or in any case raise the temperature of surface water more than 4 degrees F.	Shall not exceed 68 degrees F in cold water fisheries, nor 83 degrees F in warm water fisheries. Rise in temperature due to discharge should not exceed 1.5 degrees F. Natural seasonal and daily variations shall be maintained. There shall be no changes from background conditions that would impair any use assigned to this Class, including site-specific limits necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.	Discharges shall not cause greater than 5 degree F increase, nor greater than 0.5 degrees F when ambient temperature exceeds national ambient water quality criteria for indigenous species, and not to exceed 85 degrees F maximum.	There shall be no change in temperature unless naturally occurring.	All thermal discharges to the waters of the State shall ensure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. The natural seasonal temperature cycle shall be retained. Annual spring and fall temperature changes shall be gradual. Large day-to-day temperature fluctuations due to heat of artificial origin shall be avoided. Detailed criteria for specific types of waters are given in Part 704 of the Regulation.	The temperature increase shall not raise the temperature of the receiving waters above the recommended limit on the most sensitive receiving water use nor cause the growth of undesirable or nuisance species of biota and in no case exceed 83 degrees F. Heated discharges into designated cold water habitats shall not raise the temperature above 68 degrees F outside an established thermal mixing zone. In no case shall the temperature of the receiving water be raised more than 4 degrees F.	The change or rate of change in temperature, either upward or downward, shall be controlled to ensure full support of aquatic biota, wildlife, and aquatic habitat uses. **Cold Water Habitat**: The increase from the ambient temperature due to all discharges/activities shall not exceed 1.0 degree F except for specific situations noted in the WQS document. **Warm Water Habitat:** The increase from ambient temperature due to all discharges/activities shall not exceed the temperature derived from tables 1 & 2 in the WQS document.
Silt or Sand Deposits	N/A	None other than of natural origin except as may result form normal agricultural, road maintenance, construction activity or dredging activity, or discharge of dredged or fill materials provided all reasonable controls or BMPs are used.	N/A	N/A	Shall contain no benthic deposits unless naturally occurring. Shall be free from substances in kind or quantity which settle to form harmful deposits.	N/A	N/A	N/A
Chemical Constituents	N/A	None in concentrations or combinations that would be harmful to designated uses. Refer to Standards #s 10, 11, 12, 13, 17, and 19.	Free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	N/A	Unless naturally occurring , all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or a inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See part 703.5, table 1 for standards for specific substances.	**A.**) None in concentrations or combinations that could be harmful to humans, fish and wildlife for the most sensitive and governing water class use, or unfavorably alter the biota, or which would make the waters unsafe or unsuitable for fish and wildlife or their propagation, impair the waters for any other existing or designated use. None in such concentrations that would exceed the Water Quality Criteria and Guidelines found in appendix B. **B.**) The ambient concentration of a pollutant in a water body shall not exceed the Ambient Water Quality Criteria and Guidelines, (Appendix B) for the protection of aquatic organisms from acute or chronic effects, unless the criteria or guidelines are modified by the Director in accordance with the terms and conditions provided in the RI DEM Site Specific Aquatic Life Water Quality Criteria Development Policy.	Criteria for specific substances are given in Appendix C of the Water Quality Standards.
Phosphorus	0.10 µg/l	**Oligotrophic lakes:** 0-10 µg/l in spring and summer. **Mesotrophic lakes:** 10-30 µg/l in spring and summer. **Eutrophic lakes:** 30-50 µg/l in spring and summer. **Highly eutrophic lakes:** 50+ µg/l in spring and summer.	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	N/A	Shall contain no phosphorus unless naturally occurring.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.	Average Total Phosphorous shall not exceed 0.025 mg/l in any lake, pond, kettlehole or reservoir, and average Total P in tributaries at the point where they enter such bodies of water shall not cause exceedance of this phosphorus criteria, except as naturally occurs, unless the director determines, on a site specific basis, that a different value for phosphorous is necessary to prevent cultural eutrophication. New discharges of wastes containing phosphates will not be permitted into or immediately upstream of lakes and ponds. Phosphates shall be removed from existing discharges to the extent that such removal is or may become technically and reasonably feasible.	In all waters, total phosphorus loadings shall be limited so that they will not contribute to the acceleration of eutrophication or stimulation of the growth of aquatic biota in a manner that prevents the full support of uses. **Upland Streams:** In addition to compliance with the general policy above, for all streams above 2,500 ft in elevation, total phosphorus shall not exceed 0.010 mg/l at low median monthly flow. **Lake Champlain and Lake Memphremagog:** There shall be no significant increase over currently permitted phosphorus loading. **Lakes/ponds/reservoirs with drainage area less than 40 mi^2 and drainage area to surface area ratio less than 500:1 and their tributaries**: No significant increase over currently permitted phosphorus loadings. Discharges to tributaries shall not increase in-stream conditions by more than 0.001 mg/l at low median monthly flow. Numberic criteria for Lake Champlain and Lake Memphremagog can be found in Table 3 of Section 3-01 of the Regulation.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Sodium	N/A	None other than of natural origin.	N/A	N/A	Unless naturally occurring, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or a inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.	N/A	N/A	N/A
Chlorides	860,000 µg/l maximum concentration; 230,000 µg/l continuous concentration.	N/A	860,000 µg/l maximum concentration; 230,000 µg/l continuous concentration.	Maximum concentration of 860,000 µg/l; continuous concentration of 230,000 µg/l	Unless naturally occurring, shall not exceed 860,000 µg/l for acute exposure for freshwater aquatic organisms, 230,000 µg/l for chronic exposure for freshwater aquatic organisms	250 mg/l.	N/A	N/A
Sulfates	250,000 µg/l	N/A	250,000 µg/l	N/A	Unless naturally occurring, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or a inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.	250 mg/l.	N/A	N/A
Nitrate - N	10,000 µg/l	N/A	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	**For human health:** 10,000 µg/l for consumption of water and organisms.	Shall contain no nitrogen unless naturally occurring.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best use. Also, 10 mg/l limit.	N/A	**All Waters**: Nitrates shall be limited so not to contribute to the acceleration of eutrophication, or stimulation of the growth of aquatic biota. **Lakes, Ponds & Reservoirs:** Not to exceed 5.0 mg/l nitrate-nitrogen. **Other Water:** Not exceed 0.2 mg/l nitrate-N at flows exceeding low median monthly flows in waters above 2,500 feet altitude, NGVD. Not to exceed 2.0 mg/l as nitrate-N at flows exceeding low median monthly flows in waters at or below 2,500 feet altitude, NGVD.
Phenol	21,000 µg/l (human health for consumption of water and organism).	**For human health**: 4600 mg/l for consumption of organisms and 21 mg/l for consumption of water and organisms.	21,000 µg/l for human health for consumption of water and organisms	Maximum concentration of 10,200 µg/l; continuous concentration of 2,560 µg/l. For human health: 21,000 µg/l for consumption of water and organisms and 460,000 µg/l for consumption of organisms.	Unless naturally occurring, 10,200 µg/l for acute exposure for freshwater aquatic organisms, 2,560 µg/l for chronic exposure for freshwater aquatic organisms, 300 µg/l for protection of human health for water and fish ingestion and fish consumption only.	Total phenols 1 µg/l	**Aquatic Life**: Acute - 251 µg/L, Chronic - 5.6 µg/L **Human Health**: Consumption of water and fish - 21 mg/l, Consumption of fish only - 4600 mg/l.	**Human health**: Consumption of water and organisms - 21,000 µg/l, consumption of organisms only - 4.6 x 10^{6} µg/l
Total Dissolved Solids	250,000 µg/l (human health for consumption of water and organism).	N/A	N/A	N/A	Unless naturally occurring, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or a inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life. Shall contain no turbidity unless naturally occurring.	Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/l.	N/A	N/A
Substances Potentially Toxic	N/A	Surface waters shall be free from chemical constituents in concentrations of combinations which will or can reasonably be expected to result in acute or chronic toxicity to aquatic organisms.	All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	No toxics in toxic amounts.	Unless naturally occurring, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or a inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See Table 1 of part 703.5 of the Regulation for specific standards.	Criteria for specific substances are listed in Table 1 in Appendix B of the Regulation. To protect aquatic life, the one hour average concentration of a pollutant should not exceed the acute criteria more than once every three years on the average. An exclusion to this rule are the pesticides and PCBs acute criteria, which are considered instantaneous values. The four day average concentration of a pollutant should not exceed the chronic criteria more than once every three years on the average. These aquatic life criteria shall be achieved in all waters, except mixing zones, regardless of the waters' classification.	Where necessary to fully support an existing or designated use, waters shall be managed to prevent the discharge of toxic substances in concentrations, quantities or combinations that exceed: for toxic substances that are carcinogenic, a maximum individual lifetime risk to human health greater than 10^{-6}; for toxic substances that are noncarcinogenic, a maximum individual life time risk of no adverse effect to human health; or acute or chronic toxicity to aquatic biota or wildlife. Criteria for specific substances can be found in Appendix C of the Water Quality Standards.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Radioactivity	N/A	Discharge of radioactive materials in concentrations or combinations which would be harmful to human, animal or aquatic life shall not be allowed. Applicable criteria can be found in Title10 Part 20 of the Code of Federal Regulations.	All surface waters shall be free from radioactive substances in concentrations or combinations that would be harmful to human, animal, or aquatic life, or the most sensitive designated use; result in radionuclides in aquatic life exceeding the recommended limits for consumption by humans; or exceed MA Drinking Water Regulations.	Discharge of pollutants may not impart radioactivity that cause those waters to be unsuitable for their designated uses.	The level of radioactive materials in all waters shall not be in concentrations or combinations that would: a. Be harmful to human, animal, or aquatic life or the most sensitive designated use; b. Result in radionuclides in aquatic life exceeding the recommended limits for consumption by humans; or c. Exceed limits specified in EPA's national drinking water regulations or Env-Ws 300 whichever are more stringent.	See standards for gross beta radiation, radium 226, and strontium 90.	The level of radioactive materials in all waters shall not be in concentrations or combinations which will likely be harmful to humans, fish, wildlife, or result in concentrations in organisms producing undesirable conditions.	The waters of the State shall be managed so as to prevent the discharge of radioactive substances in concentrations, quantities, or combinations that may create a significant likelihood of an adverse impact on human health or a risk of acute or chronic toxicity of aquatic biota, fish or wildlife. Unless otherwise required by these rules, the Secretary shall determine limits for discharges containing radioactive substances based on the results of biological toxicity assessments and the appropriate available scientific data, including but not limited to: The VT State Health Regulation, Part 5, Chapter 3 "Radiological Health", effective as of 12/10/77, and the code 10 CFR 50, Appendix I. The discharge of radioactive substances shall not exceed the lowest limits that are reasonably achievable.
Gross Beta	N/A	N/A	The concentration which produces an annual dose of 4 millirems/yr.	N/A	Shall not contain gross beta radioactivity in excess of 1000 PC/l.	1000 PCI/l, excluding Sr-90 and alpha emitters.	N/A	N/A
Radium 226	N/A	N/A	5 pCi/l	N/A	Shall contain no radium- 226 in excess of 3 PC/l.	3 PCI/l	N/A	N/A
Strontium 90	N/A	N/A	N/A	N/A	Shall not contain strontium-90 in excess of 10 PC/l.	8 PC/l	N/A	N/A
Mixing Zones	Quality for life within a mixing zone should be such that the 96- hour LC50 for biota significant to the indigenous aquatic community is not exceeded; the mixing zone should be free from effluent substances that will settle to form objectionable deposits free from effluent-associated materials that float to form unsightly masses, and free from effluent-associated substances that produce objectionable color, odor, or turbidity.	Established on a case by case basis. Based on characteristics of the receiving waterbody, including sensitivity, and aquatic life. Refer to Standard # 10.	Mixing zones shall be limited to an area or volume as small as feasible. Mixing zones shall not interfere with the migration or free movement of fish or other aquatic life. Mixing zones shall not create nuisance conditions, accumulate pollutants in sediments or biota in toxic amounts or otherwise diminish the existing or designated uses of the segment disproportionately.	N/A	Prohibited in all Class A waters.	**For thermal mixing zones**: the department shall specify definable, numerical limits for all mixing zones. Conditions in the mixing zone shall not be lethal in contravention of water quality standards to aquatic biota which may enter the zone. The location of mixing zones for thermal discharges shall not interfere with spawning areas, nursery areas, and fish migration routes. **For non-thermal mixing zones**: Within mixing zones, water quality standards for pollutants are expected to be exceeded, potentially impairing habitat usability for fish and benthic communities. Detailed guidelines can be found in TOGS 1.3.1	**All mixing zones:** Meet criteria for aesthetics, in accordance with rule 8.D.(1).b. Limited to an area/volume that will prevent interference with existing and designated uses in the waterbody segment and beyond. Allow appropriate zone of passage for fish and organisms, prohibit lethality to organisms passing through zone, and protect for spawning/nursery habitat. Not allow substances to accumulate in sediments, fish, wildlife or food chains **Thermal:** Where thermal zones are allowed by the Director, the zone will be limited to no more than 1/4 of the cross sectional area and /or volume of river flow, stream or estuary, leaving at least 3/4 free as a zone of passage. **Non-thermal:** The Director may recognize a limited acute and/or chronic mixing zone (s) on a case-by-case basis. The locations, size ad shape shall be provided for the maximum protection of fish and wildlife.	No mixing zones shall be created in Class A waters.
Class B Waters								
Aesthetics	All waters free from substances attributable to wastewater or other discharges that: settle to form objectionable deposits; float as debris, scum, oil, or other matter to form nuisances; produce objectionable color, odor, taste, or turbidity; injure or are toxic or produce adverse physiological responses in humans, animals or plants; and produce undesirable or nuisance aquatic life.	Good to Excellent.	All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste, or turbidity, or produce undesirable or nuisance species. Class B waters shall have consistently good aesthetic value.	N/A	All waters shall be free from substances in kind or quantity which: float as foam, debris, scum or other visible substances; produce odor, color, taste or turbidity which is not naturally occurring and would render it unsuitable for its designated use; result in the dominance of nuisance; or interfere with recreational uses. Shall contain no slicks, odors, or surface floating solids that would impair any existing or designate use, unless naturally occurring. Turbidity shall not exceed naturally occurring conditions by more than 10 NTUs.	No taste, odor, or odor-producing, toxic, or other deleterious substances in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. See section 703.5, table 1 in the Regulation for standards for specific substances.	All waters shall be free from pollutants in concentrations or combinations that: Settle to form deposits that are unsightly, putrescent, or odorous; Float as debris, oil, grease, scum or other floating material attributable to wastes; Produce odor or taste or change the color or physical, chemical or biological conditions; or Result in the dominance of species of fish and wildlife; To such a degree as to create a nuisance or interfere with the existing or designated uses.	In Water Management Type One waters - consistently exhibit excellent aesthetic values; In Water Management Type Two waters - consistently exhibit very good aesthetic values; In Water Management Type Three waters - seasonal and temporal variability may be allowed provided that good aesthetic value is achieved; In all other Class B waters, water of a quality that consistently exhibits good aesthetic value.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Aquatic Life	N/A	No discharges in concentrations or combinations as to adversely effect aquatic life.	N/A	Discharges shall not cause adverse impact to aquatic life in that the receiving waters shall be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community.	All surface waters shall provide, wherever attainable, for the protection and propagation of fish, shellfish and wildlife. The surface waters shall support and maintain a balanced, integrated, and adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of similar natural habitats of region. Differences from naturally occurring conditions shall be limited to non-detrimental differences in community structure and function. Unless flows are caused by naturally occurring conditions, surface water quantity shall be maintained at levels adequate to protect existing and designated uses, and to maintain the chemical, physical and biological integrity of surface waters.	See section 703.5, table 1 for standards for specific substances.	At a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that: adversely affect the composition of fish and wildlife; adversely affect the physical, chemical, or biological integrity of the habitat; interfere with the propagation of fish and wildlife; or adversely alter the life cycle functions, uses, processes and activities of fish and wildlife.	No change form the reference condition that would prevent the full support of aquatic biota, wildlife, or aquatic habitat uses. All life cycle functions are maintained and protected. In Water Management Type One waters - change from the reference condition for aquatic macroinvertebrate and fish assemblages shall be limited to minor changes in the relative proportions of taxonomic and functional components; relative proportions of tolerant and intolerant components are within the range of the reference condition. Changes in the aquatic habitat shall be limited to minimal differences from the reference condition consistent with the full support of all aquatic biota and wildlife uses. In Water Management Type Two waters - change from the reference condition for aquatic macroinvertebrate and fish assemblages shall be limited to moderate changes in the relative proportions of tolerant, intolerant, taxonomic, and functional components. Changes in the aquatic habitat shall be limited to minor differences from the reference condition consistent with the full support of all aquatic biota and wildlife uses. In Water Management Type Three waters - change from the reference condition for aquatic macroinvertebrate and fish assemblages shall be limited to moderate changes in the relative proportions of tolerant, intolerant, taxonomic, and functional components. Changes in the aquatic habitat shall be limited to moderate differences from the reference condition consistent with the full support of all aquatic biota and wildlife uses. When such habitat changes are a result of hydrological modification or water level fluctuation, compliance may be determined on the basis of aquatic habitat studies. In all other Class B waters - no change from reference conditions that would have an undue adverse effect on the composition of the aquatic biota, the physical or chemical nature of the substrate or the species composition or propagation of fishes.
Dissolved Oxygen (DO)	**Cold Water Criteria**: 30 day mean 6.5 mg/l. **Warm Water Criteria**: 30 day mean 5.5 mg/l.	Not less than 5 mg/l at any time.	Not less than 6 mg/l in cold water fish habitat, not less than 5 mg/l in warm water fish habitat unless background conditions are lower. Natural seasonal and daily variations above these levels shall be maintained; levels should not be lowered below 75% saturation in cold water fish habitat, nor below 60% saturation in warm water fish habitat due to a discharge. Site-specific criteria may apply where background levels are lower than specified levels, to the hypolimnion of stratified lakes or where the Department determines that designated uses are not impaired.	The dissolved oxygen content shall be not less than 7 ppm or 75% saturation, which is higher, except that for the period from October 1 to May 14, the 7-day mean dissolved oxygen concentration shall not be less than 9.5 ppm and the 1-day minimum dissolved oxygen concentration shall not be less than 8.0 ppm in identified fish spawning areas.	(a) Except as naturally occurs, or in waters identified in RSA 485-A:8, III, or subject to (b) below, class B waters shall have a dissolved oxygen content of at least 75% of saturation, based on a daily average, and an instantaneous minimum dissolved oxygen concentration of at least 5 mg/l. (b) For the period from October 1st to May 14th, in areas identified by the fish and game department as cold water fish spawning areas of species whose early life stages are not directly exposed to the water, the 7 day mean dissolved oxygen concentration shall be at least 9.5 mg/l and the instantaneous minimum dissolved oxygen concentration shall be at least 8 mg/l. This period shall be extended to June 30 for a particular waterbody if the fish and game department determines it is necessary to protect spring spawners and late hatches of fall spawners. (c) Unless naturally occurring , surface waters within the top 25 percent of depth of thermally unstratified lakes, ponds, impoundments and reservoirs or within the epilimnion shall contain a dissolved oxygen content of at least	For cold waters suitable for trout spawning, the dissolved oxygen concentration shall not be less than 7.0 mg/l from other than natural conditions. For trout waters, 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 non trout waters the minimum daily average shall not be less than 5.0 mg/l and at no time shall the dissolved oxygen be less than 4.0 mg/l.	**Cold Water Fish Habitat**- Dissolved oxygen content of not less than 75% saturation, based on daily average, and instantaneous minimum concentration of 5mg/l. From October 1-May 14 in designated cold water fish spawning areas the following criteria apply: For species with early life stages not exposed to the water column, the 7 day mean dissolved oxygen shall not be less than 9.5mg/l and the instantaneous minimum dissolved oxygen shall not be less than 8mg/l. For species with early life stages exposed to the water column, the 7 day mean dissolved oxygen shall not be less than 6.5 mg/l and the instantaneous minimum dissolved oxygne shall not be less than 5.0mg/l. **For Warm Water Fish Habitat:** the dissolved oxygen shall not be less than 60% based on daily avgerage and an instantaneous minimum dissolved oxygen concentration shall not be less than 5 mg/l. The 7 day mean water column dissolved oxygen concentration shall not be less than 6 mg/l.	The specified dissolved oxygen criteria for each designated fish habitat type will be considered absolute instantaneous minimum values. In addition, fluctuations above the minimum shall be maintained as necessary to support aquatic habitat. Cold Water Fish Habitat - Not < 7mg/l and 75% saturation at all times, nor < 95% saturation during late egg maturation and larval development of salmonids in areas that the secretary determines are salmon spawning or nursery areas important to the fishery resource. Not < 6 mg/l and 70% saturation at all times in all other waters designated as a cold water fishery. Warm Water Fish Habitat: Not < 5 mg/l and 60% saturation at all times.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
					75 percent saturation, based on a daily average and an instantaneous minimum dissolved oxygen content of at least 5 mg/l. Unless naturally occurring, the dissolved oxygen content below those depths shall be consistent with that necessary to maintain and protect existing and designated uses.			
Sludge Deposits, Solid Refuse, Floating Solids, Oil, Grease and Scum	**For domestic water supply**: Virtually free from oil and grease, particularly from the tastes and odors that emanate from petroleum products. **For aquatic life**: (1) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater or marine species, (2) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed, (3) Surface waters shall be virtually free from floating non-petroleum oils of vegetable or animal origin, as well as petroleum derived oils.	None except for small amounts that may result from the discharge from a permitted waste treatment facility and none exceeding levels necessary to protect and maintain all designated uses.	Free from oil and grease, petrochemicals and other volatile or synthetic organic pollutants. Free from pollutants in concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom.	Waters shall be free from floating substances that impair the characteristics and designated uses ascribed to their class.	Shall contain no oil or grease, slicks, odors, or surface floating solids that would impair any existing or designated use, unless naturally occurring. Shall contain no benthic deposits that have a detrimental impact on the benthic community, unless naturally occurring. Shall be free from substances in kind or quantity which settle to form harmful deposits, float as foam, scum or other visible substances, produce odor, color, taste or turbidity which is not naturally occurring and would render it unsuitable for its designated use.	No residue attributable to sewage, industrial wastes, nor visible oil film nor globules of grease.	None allowable.	**Sludge Deposits or solid refuse:** None. **Floating solids, oil, grease, and scum:** None in such concentrations of combinations that would prevent the full support of uses.
Color and Turbidity	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity. **Color**: Waters shall be virtually free from substances producing objectionable color for aesthetic purposes; the source of supply should not exceed 75 color units for domestic water supplies; increased color should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from seasonally established norm for aquatic life.	**Color** - None that causes visible discoloration of the surface water outside of the designated zone of influence. **Turbidity** - Shall not exceed 5 NTU over ambient levels and none exceeding levels necessary to protect and maintain all designated uses (BMPs are to be used).	These waters shall be from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class.	No discharge of pollutants that imparts color or turbidity to the water that impairs designated uses. No discharge may increase color by more than 20 cpu; collectively all discharges may not increase color by more than 40 cpu.	**Color:** Shall contain no color in such concentrations that would impair any existing or designated uses, unless naturally occurring. **Turbidity:** Shall not exceed naturally occurring conditions by more than 10 NTUs.	**Color**: None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages. **Turbidity** - No increase that will cause a substantial visible contrast to natural conditions.	**Color**: None in such concentrations that would impair any usages specifically assigned to this class. **Turbidity**: Not to exceed 10 NTU over natural background.	**Color:** None that would prevent the full support of uses. **Turbidity**: Cold Water Fish Habitats are not to exceed 10 NTU, Warm Water Fish Habitats are not to exceed 25 NTU.
Bacteria (Count/100ml)	**For bathing water**, the geometric mean of the indicated bacterial densities should not exceed one or the other of the following: E. coli 126/100ml; or enterococci 33/100ml.	**E. coli:** Designated swimming: Geometric mean less than 126/100 ml, Single sample maximum 235/100 ml; Non-designated swimming: Geometric mean less than 126/100 ml, Single sample maximum 410/100 ml; All other recreational uses: Geometric mean less than 126/100 ml, Single sample maximum 576/100 ml.	**Fecal Coliform:** Shall not exceed a geometric mean of 200/100 ml in any representative sample, nor shall more than 10% of samples exceed 400/100 ml.	**E. coli:** Between May 15 and September 30th, the number of E. coli may not exceed a geometric mean of 64/100 ml, or an instantaneous level of 427/100 ml.	**E.coli:** Shall contain not more than either a geometric mean based on at least 3 samples obtained over a 60 day period of 126/100 ml, or greater than 406/100 ml in any one sample; and for designated beach areas shall not contain more than a geometric mean based on at least 3 samples obtained over a 60 day period of 47/100 ml or 88/100 ml in any one sample, unless naturally occurring. **Enterococci**: Tidal waters used for swimming purposes shall contain not more than either a geometric mean based on at least 3 samples collected over a 60 day period of 35 enterococci/100 ml, or 104/100 ml in any one sample unless naturally occurring. **Bacteria standards for human consumption of shellfish:** Tidal waters used for growing or taking of shellfish for human consumption shall, in addition to the foregoing requirements, be in accordance with criteria recommended under the National Shellfish Program Manual of Operation, United States Department of Food and Drug Administration.	**Total Coliforms:** The monthly median value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 2400/100 ml and 5000/ 100 ml, respectively. **Fecal Coliform**: The monthly geometric mean from a minimum of five examinations shall not exceed 200/100 ml.	**Total Coliform:** Not to exceed a geometric mean value of 1000/100 ml and not more than 20% of the samples shall exceed a value of 2400/100ml. **Fecal Coliform:** Not to exceed a geometric mean value of 200/100 ml and not more than 20% of the samples shall exceed a value of 500/100 ml.	**E. coli:** Not to exceed 77 organisms/100ml except that the Secretary may, by permit condition, waive compliance with this criterion during all or any portion of the period between October 31, and April 1, provided that a health hazard is not created. The Secretary shall provide written notice to the Vermont Department of Health prior to issuing a permit waiving compliance with the E. coli criterion.
Taste and Odor	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity.	None that would impair any use specifically assigned to this Class.	None in such concentrations or combinations that are aesthetically objectionable, that would impair any use assigned to this Class, or that would cause tainting or undesirable flavors in the edible portions of aquatic life.	No discharge of pollutants that imparts taste is allowed.	No odors that would impair any existing or designated use unless naturally occurring. Shall be free from odor and taste which is not naturally occurring and would render it unsuitable for its designated uses. Tainting substances shall not be present in concentrations that individually or in combination are detectable by taste and odor tests performed on edible portions of aquatic organisms.	None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.	None in such concentrations that would impair any usages specifically assigned to this class nor cause taste or odor in edible portions of fish.	None in such concentrations that would have an undue adverse effect on beneficial values or uses or on the taste or odor of fish.
pH	**Aquatic Life**: 6.5-9; **Domestic Water Supplies**: 5-9	6.5-8.0	Shall be in the range 6.5 - 8.3, should not change more than 0.5 units outside of background range. There shall be no change from background conditions that would impair any use assigned to this Class.	6.0-8.5	Shall be 6.5-8.0, unless due to natural causes.	Shall not be less than 6.5, nor more than 8.5.	6.5-9.0 or as naturally occurs.	Values shall be maintained within the range of 6.5 and 8.5. The change, or rate of change, either upward or downward shall not result in an undue adverse effect on aquatic biota, fish or wildlife.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Alkalinity	20 mg/l as CaCO3 for freshwater aquatic life except where natural conditions are less.	N/A	20 mg/l as CaCO3 for freshwater aquatic life except where natural conditions are less.	N/A	20 mg/l for freshwater chronic aquatic life unless naturally occurring	N/A	N/A	No change from reference conditions that would prevent the full support of the aquatic biota, wildlife, and aquatic habitat use.
Temperature	For any time of year, there are two upper limiting temperatures for a location (based on the important sensitive species found there at that time): (1) One limit consists of a maximum temperature for short exposures that is time dependent and is given by a species-specific equation; (2) the second value is a limit on the weekly average temperature (see Gold Book).	There shall be no changes from natural conditions that would impair any existing or designated uses assigned to this Class and, in no case exceed 85 degrees F, or in any case raise the temperature of surface water more than 4 degrees F.	Shall not exceed 68 degrees F in cold water fisheries, nor 83 degrees F in warm water fisheries, and the rise in temperature due to discharge shall not exceed 3 degrees F in rivers and streams designated as cold water fisheries, nor 5 degrees F in rivers and streams designated as warm water fisheries; in lakes and ponds the rise shall not exceed 3 degrees F in the epilimnion. Natural seasonal and daily variations shall be maintained. There shall be no changes from background that would impair any use assigned to this Class, including site-specific limits necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.	Discharges shall not cause greater than 5 degree F increase, nor greater than 0.5 degrees F when ambient temperature exceeds national ambient water quality criteria for indigenous species, and not to exceed 85 degrees F maximum.	Temperature shall be in accordance with RSA 485-A:8, II, and VIII, namely: Any stream temperature increase associated with the discharge of treated sewage, waste or cooling water, water diversions, or releases shall not be such as to appreciably interfere with the uses assigned to this class. In prescribing minimum treatment provisions for thermal wastes discharged to interstate waters, the department shall adhere to the water quality requirements and recommendations of the NH Fish and Game Department, NEIWPCC, or the U.S. EPA, whichever requirements and recommendations provide the most effective level of thermal pollution control.	All thermal discharges to the waters of the State shall ensure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. The natural seasonal temperature cycle shall be retained. Annual spring and fall temperature changes shall be gradual. Large day-to-day temperature fluctuations due to heat of artificial origin shall be avoided. Detailed criteria for specific types of waters are given in Part 704 of the Regulation.	The temperature increase shall not raise the temperature of the receiving waters above the recommended limit on the most sensitive receiving water use nor cause the growth of undesirable or nuisance species of biota, and in no cases exceed 83 degrees F. Heated discharges into designated cold water habitats shall not raise the temperature above 68 degrees F outside an established thermal mixing zone. In no case shall the temperature of the receiving water be raised more than 4 degrees F.	The change or rate of change in temperature, either upward or downward, shall be controlled to ensure full support of aquatic biota, wildlife, and aquatic habitat uses. **Cold Water Habitat**: The increase from the ambient temperature due to all discharges/activities shall not exceed 1.0 degree F except for specific situations noted in the WQS document. **Warm Water Habitat:** The increase from ambient temperature due to all discharges/activities shall not exceed the temperature derived from tables 1 & 2 in the WQS document.
Silt or Sand Deposits	N/A	None other than of natural origin except as may result form normal agricultural, road maintenance, construction activity or dredging activity, or discharge of dredged or fill materials provided all reasonable controls or BMPs are used.	N/A	N/A	Shall contain no benthic deposits that have a detrimental impact on the benthic community, unless naturally occurring. Shall be free from substances in kind or quantity which settle to form harmful deposits.	N/A	N/A	N/A
Chemical Constituents	N/A	None in concentrations or combinations which would be harmful to designated used. Refer to Standards 10, 11, 12, 13, 17, and 19.	Free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	N/A	Unless naturally occurring or allowed under part of Env-Ws 1707, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or a inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See part 703.5, table 1 for standards for specific substances.	**A.**) None in concentrations or combinations that could be harmful to humans, fish and wildlife for the most sensitive and governing water class use, or unfavorably alter the biota, or which would make the waters unsafe or unsuitable for fish and wildlife or their propagation, impair the waters for any other existing or designated use. None in such concentrations that would exceed the Water Quality Criteria and Guidelines found in appendix B. **B.**) The ambient concentration of a pollutant in a water body shall not exceed the Ambient Water Quality Criteria and Guidelines, (Appendix B) for the protection of aquatic organisms from acute or chronic effects, unless the criteria or guidelines are modified by the Director in accordance with the terms and conditions provided in the RI DEM Site Specific Aquatic Life Water Quality Criteria Development Policy.	Criteria for specific substances are given in Appendix C of the Water Quality Standards.
Phosphorus	0.10 µg/l	**Oligotrophic lakes:** 0-10 µg/l in spring and summer. **Mesotrophic lakes:** 10-30 µg/l in spring and summer. **Eutrophic lakes:** 30-50 µg/l in spring and summer. **Highly eutrophic lakes:** 50+ µg/l in spring and summer.	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	N/A	Shall contain no phosphorus in such concentrations that would impair any existing or designated uses, unless naturally occurring. Existing discharges containing phosphorus which encourage cultural eutrophication shall be treated to remove phosphorus to ensure attainment and maintenance of water quality standards. There shall be no new or increased discharge of phosphorus into lakes or ponds. In addition, there shall be no new discharge of wastewater containing phosphorus to tributaries of lakes or ponds that would contribute to cultural eutrophication or growth of weeds or algae in such lakes and ponds.	None in amounts that will result in growth of algae, weeds and slimes that will impair the waters for their best use.	Average Total Phosphorous shall not exceed 0.025 mg/l in any lake, pond, kettlehole or reservoir, and average Total phosphorus in tributaries at the point where they enter such bodies of water shall not cause exceedance of this phosphorus criteria, except as naturally occurs, unless the director determines, on a site specific basis, that a different value for phosphorous is necessary to prevent cultural eutrophication. New discharges of wastes containing phosphates will not be permitted into or immediately upstream of lakes and ponds. Phosphates shall be removed from existing discharges to the extent that such removal is or may become technically and reasonably feasible.	In all waters, total phosphorus loadings shall be limited so that they will not contribute to the acceleration of eutrophication or stimulation of the growth of aquatic biota in a manner that prevents the full support of uses. **Upland Streams:** In addition to compliance with the general policy above, for all streams above 2,500 ft in elevation, total phosphorus shall not exceed 0.010 mg/l at low median monthly flow. **Lake Champlain and Lake Memphremagog:** There shall be no significant increase over currently permitted phosphorus loading. **Lakes/ponds/reservoirs with drainage area less than 40 mi^2 and drainage area to surface area ratio less than 500:1 and their tributaries**: No significant increase over currently permitted phosphorus loadings. Discharges to tributaries shall not increase in-stream conditions by more than 0.001 mg/l at low median monthly flow. Numberic criteria for Lake Champlain and Lake Memphremagog can be found in Table 3 of Section 3-01 of the Regulation.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Sodium	N/A	N/A	N/A	N/A	Unless naturally occurring, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or a inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.	N/A	N/A	N/A
Chlorides	860,000 µg/l maximum concentration; 230,000 µg/l continuous concentration.	N/A	860,000 µg/l maximum concentration; 230,000 µg/l continuous concentration.	Maximum concentration of 860,000 µg/l; continuous concentration of 230,000 µg/l	Unless naturally occurring, shall not exceed 860,000 µg/l for acute exposure for freshwater aquatic organisms, 230,000 µg/l for chronic exposure for freshwater aquatic organisms	N/A	N/A	N/A
Sulfates	250,000 µg/l	N/A	250,000 µg/l	N/A	Unless naturally occurring, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or a inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.	N/A	N/A	N/A
Nitrate - N	10,000 µg/l	N/A	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	**For human health:** 10,000 µg/l for consumption of water and organisms.	Shall contain no nitrogen in such concentrations that would impair any existing or designated uses, unless naturally occurring. Existing discharges containing nitrogen which encourage cultural eutrophication shall be treated to remove nitrogen to ensure attainment and maintenance of water quality standards. In addition, there shall be no new discharge of wastewater containing nitrogen to tributaries of lakes or ponds that would contribute to cultural eutrophication or growth of weeds or algae in such lakes and ponds.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best use.	N/A	**All Waters**: Nitrates shall be limited so not to contribute to the acceleration of eutrophication, or stimulation of the growth of aquatic biota. **Lakes, Ponds & Reservoirs:** Not to exceed 5.0 mg/l nitrate-nitrogen. **Other Water:** Not to exceed 5.0 mg/l as nitrate-N at flows exceeding low median monthly flows.
Phenol	21,000 µg/l (human health for consumption of water and organism).	**For human health**: 4600 mg/l for consumption of organisms and 21 mg/l for consumption of water and organisms.	21,000 µg/l for human health for consumption of water and organisms	Maximum concentration of 10,200 µg/l; continuous concentration of 2,560 µg/l. For human health: 21,000 µg/l for consumption of water and organisms and 460,000 µg/l for consumption of organisms.	Unless naturally occurring, 10,200 µg/l for acute exposure for freshwater aquatic organisms, 2,560 µg/l for chronic exposure for freshwater aquatic organisms, 300 µg/l for protection of human health for water and fish ingestion and fish consumption only.	N/A	**Aquatic Life**: Acute - 251 µg/L, Chronic - 5.6 µg/L **Human Health**: Consumption of water and fish - 21 mg/l, Consumption of fish only - 4600 mg/l.	**Human health**: Consumption of water and organisms - 21,000 µg/l, consumption of organisms only - 4.6 x 10^6 µg/l
Total Dissolved Solids	250,000 µg/l (human health for consumption of water and organism).	N/A	N/A	N/A	Unless naturally occurring, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or are inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life. Turbidity shall not exceed naturally occurring conditions by more than 10 NTUs.	Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/l.	N/A	N/A
Substances Potentially Toxic	N/A	Surface waters shall be free from chemical constituents in concentrations of combinations which will or can reasonably be expected to result in acute or chronic toxicity to aquatic organisms.	All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	No toxics in toxic amounts.	Unless naturally occurring, all surface waters shall be free from toxic substances or chemical constituents in concentrations or combinations that: injure or are inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife which might consume aquatic life.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See Table 1 of part 703.5 of the Regulation for specific standards.	Criteria for specific substances are listed in Table 1 in Appendix B of the Regulation. To protect aquatic life, the one hour average concentration of a pollutant should not exceed the acute criteria more than once every three years on the average. An exclusion to this rule are the pesticides and PCBs acute criteria, which are considered instantaneous values. The four day average concentration of a pollutant should not exceed the chronic criteria more than once every three years on the average. These aquatic life criteria shall be achieved in all waters, except mixing zones, regardless of the waters' classification.	Where necessary to fully support uses an existing or designated use, waters shall be managed to prevent the discharge of toxic substances in concentrations, quantities or combinations that exceed: for toxic substances that are carcinogenic, a maximum individual lifetime risk to human health greater than 10^{-6}; for toxic substances that are noncarcinogenic, a maximum individual life time risk of no adverse effect to human health; or acute or chronic toxicity to aquatic biota or wildlife. Criteria for specific substances can be found in Appendix C of the Water Quality Standards.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Radioactivity	N/A	Discharge of radioactive materials in concentrations or combinations which would be harmful to human, animal or aquatic life shall not be allowed. Applicable criteria can be found in Title10 Part 20 of the Code of Federal Regulations.	All surface waters shall be free from radioactive substances in concentrations or combinations that would be harmful to human, animal, or aquatic life, or the most sensitive designated use; result in radionuclides in aquatic life exceeding the recommended limits for consumption by humans; or exceed MA Drinking Water Regulations.	Discharge of pollutants may not impart radioactivity that cause those waters to be unsuitable for their designated uses.	The level of radioactive materials in all waters shall not be in concentrations or combinations that would: a. Be harmful to human, animal, or aquatic life or the most sensitive designated use; b. Result in radionuclides in aquatic life exceeding the recommended limits for consumption by humans; or c. Exceed limits specified in EPA's national drinking water regulations or Env-Ws 300 whichever are more stringent.	N/A	The level of radioactive materials in all waters shall not be in concentrations or combinations which will likely be harmful to humans, fish, wildlife, or result in concentrations in organisms producing undesirable conditions.	The waters of the State shall be managed so as to prevent the discharge of radioactive substances in concentrations, quantities, or combinations that may create a significant likelihood of an adverse impact on human health or a risk of acute or chronic toxicity of aquatic biota, fish or wildlife. Unless otherwise required by these rules, the Secretary shall determine limits for discharges containing radioactive substances based on the results of biological toxicity assessments and the appropriate available scientific data, including but not limited to: The VT State Health Regulation, Part 5, Chapter 3 "Radiological Health", effective as of 12/10/77, and the code 10 CFR 50, Appendix I. The discharge of radioactive substances shall not exceed the lowest limits that are reasonably achievable.
Gross Beta	N/A	N/A	The concentration which produces an annual dose of 4 millirems/yr.	N/A	Shall not contain gross beta radioactivity in excess of 1000 PC/l.	N/A	N/A	N/A
Radium 226	N/A	N/A	5 pCi/l	N/A	Shall contain no radium- 226 in excess of 3 PC/l.	N/A	N/A	N/A
Strontium 90	N/A	N/A	N/A	N/A	Shall not contain strontium-90 in excess of 10 PC/l.	N/A	N/A	N/A
Mixing Zones	Quality for life within a mixing zone should be such that the 96- hour LC50 for biota significant to the indigenous aquatic community is not exceeded; the mixing zone should be free from effluent substances that will settle to form objectionable deposits free from effluent-associated materials that float to form unsightly masses, and free from effluent-associated substances that produce objectionable color, odor, or turbidity.	Established on a case by case basis. Based on characteristics of the receiving waterbody, including sensitivity, and aquatic life. Refer to Standard # 10.	Mixing zones shall be limited to an area or volume as small as feasible. Mixing zones shall not interfere with the migration or free movement of fish or other aquatic life. Mixing zones shall not create nuisance conditions, accumulate pollutants in sediments or biota in toxic amounts or otherwise diminish the existing or designated uses of the segment disproportionately.	Established on a case-by-case basis.	The department shall designate a limited area or volume of the surface water as a mixing zone if the applicant provides sufficient scientifically valid documentation to allow the department to independently determine that all criteria in Env-Ws-1707.02 have been met. Minimum Criteria: (a) Shall be free from substances in kind or quantity which settle to form harmful deposits; float as foam, debris, scum or other visible substances; produce odor, color, taste or turbidity which is not naturally occurring and would render it unsuitable for its designated uses; result in the dominance of nuisance species; or interfere with recreational activities, (b) do not interfere with the biological communities or populations of indigenous species, (c) do not result in the accumulation of pollutants in the sediments or biota, (d) allow a zone of passage for swimming and drifting organisms, (e) do not interfere with existing and designated uses of the surface water; (f) d not impinge upon spawning grounds and/or nursery areas of any indigenous aquatic species, (g) do not result in the mortality o mixing zone, (h) do not exceed the chronic toxicity value of 1.0 TUc at the mixing zone boundary, and (i) do not result in an overlap with another mixing zone.	**For thermal mixing zones**: the department shall specify definable, numerical limits for all mixing zones. Conditions in the mixing zone shall not be lethal in contravention of water quality standards to aquatic biota which may enter the zone. The location of mixing zones for thermal discharges shall not interfere with spawning areas, nursery areas, and fish migration routes. **For non-thermal mixing zones**: Within mixing zones, water quality standards for pollutants are expected to be exceeded, potentially impairing habitat usability for fish and benthic communities. Detailed guidelines can be found in TOGS 1.3.1	**All mixing zones:** Meet criteria for aesthetics, in accordance with rule 8.D.(1).b. Limited to an area/volume that will prevent interference with existing and designated uses in the waterbody segment and beyond. Allow appropriate zone of passage for fish and organisms, prohibit lethality to organisms passing through zone, and protect for spawning/nursery habitat. Not allow substances to accumulate in sediments, fish, wildlife or food chains **Thermal:** Where thermal zones are allowed by the Director, the zone will be limited to no more than 1/4 of the cross sectional area and /or volume of river flow, stream or estuary, leaving at least 3/4 free as a zone of passage. **Non-thermal:** The Director may recognize a limited acute and/or chronic mixing zone (s) on a case-by-case basis. The locations, size ad shape shall be provided for the maximum protection of fish and wildlife.	The mixing zone shall not extend more than 200 feet from the point of discharge.
Class C Waters								
Aesthetics	All waters free from substances attributable to wastewater or other discharges that: settle to form objectionable deposits; float as debris, scum, oil, or other matter to form nuisances; produce objectionable color, odor, taste, or turbidity; injure or are toxic or produce adverse physiological responses in humans, animals or plants; and produce undesirable or nuisance aquatic life.	See below.	All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste, or turbidity, or produce undesirable or nuisance species. Class C waters shall have good aesthetic value.	N/A	No such classification.	No taste, odor, or odor-producing, toxic, or other deleterious substances in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. See section 703.5, table 1 in the Regulation for standards for specific substances.	All waters shall be free from pollutants in concentrations or combinations that: Settle to form deposits that are unsightly, putrescent, or odorous; Float as debris, oil, grease, scum or other floating material attributable to wastes; Produce odor or taste or change the color or physical, chemical or biological conditions; or Result in the dominance of species of fish and wildlife; To such a degree as to create a nuisance or interfere with the existing or designated uses.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Aquatic Life	N/A	See below.	N/A	Discharges may cause some changes to aquatic life, provided that the receiving waters shall be of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.	No such classification.	See section 703.5, table 1 for standards for specific substances.	At a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that: adversely affect the composition of fish and wildlife; adversely affect the physical, chemical, or biological integrity of the habitat; interfere with the propagation of fish and wildlife; or adversely alter the life cycle functions, uses, processes and activities of fish and wildlife.	No such classification.
Dissolved Oxygen (DO)	**Cold Water Criteria**: 30 day mean 6.5 mg/l. **Warm Water Criteria**: 30 day mean 5.5 mg/l.	Class C Waters in CT are defined as presently not meeting Water Quality Criteria or not supporting one or more assigned designated uses due to pollution. The goal for such waters can be improved using current technology. Class goal will always be Class AA, A or Class B, whichever parameters govern all activities.	Shall not be less than 5mg/l at least 16 hours of any 24 hour period and not les than 3.0 mg/l at any time unless background conditions are lower. Natural seasonal and daily variations above these levels shall be maintained; levels shall not be lowered below 50% saturation due to a discharge. Site-specific criteria may apply where background levels are lower than specified levels, or to the hypolimnion of stratified lakes where the Department determines that designated uses are not impaired.	Not less than 5 parts per million or 60% of saturation whichever is higher; not less than 6.5 ppm as a 30-day average when the temperature is equal to or less than 22 degrees F or the ambient temperature whichever is lower, or 24 degrees F or the ambient temperature, whichever is lower, for those waters that have received discharge licenses prior to March 16, 2004. In salmonoid spawning areas where water quality must be maintained at levels which support this purpose.	No such classification.	For cold waters suitable for trout spawning, the dissolved oxygen concentration shall not be less than 7.0 mg/l from other than natural conditions. For trout waters, 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 non trout waters the minimum daily average shall not be less than 5.0 mg/l and at no time shall the dissolved oxygen be less than 4.0 mg/l.	**Cold Water Fish Habitat**- Dissolved oxygen (DO) content of not less than 75% saturation, based on daily average, and instantaneous minimum concentration of 5mg/l. From October 1-May 14 in designated cold water fish spawning areas the following criteria apply: For species with early life stages not exposed to the water column, the 7 day mean dissolved oxygen shall not be less than 9.5mg/l and the instantaneous minimum dissolved oxygen shall not be less than 8mg/l. For species with early life stages exposed to the water column, the 7 day mean dissolved oxygen shall not be less than 6.5 mg/l and the instantaneous minimum dissolved oxygne shall not be less than 5.0mg/l. **For Warm Water Fish Habitat** the dissolved oxygen shall not be less than 60% based on daily avgerage and an instantaneous minimum dissolved oxygen concentration shall not be less than 5 mg/l. The 7 day mean water column dissolved oxygen concentration shall not be less than 6 mg/l.	No such classification.
Sludge Deposits, Solid Refuse, Floating Solids, Oil, Grease and Scum	**For domestic water supply**: Virtually free from oil and grease, particularly from the tastes and odors that emanate from petroleum products. **For aquatic life**: (1) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater or marine species, (2) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed, (3) Surface waters shall be virtually free from floating non-petroleum oils of vegetable or animal origin, as well as petroleum derived oils.	See above.	Free from oil and grease, petrochemicals and other volatile or synthetic organic pollutants. Free from pollutants in concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom.	Waters shall be free from floating substances that impair the characteristics and designated uses ascribed to their class.	No such classification.	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.	None in such amounts that it would impair any usages specifically assigned to this class.	No such classification.
Color and Turbidity	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity. **Color**: Waters shall be virtually free from substances producing objectionable color for aesthetic purposes; the source of supply should not exceed 75 color units for domestic water supplies; increased color should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from seasonally established norm for aquatic life.	See above.	These waters shall be from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class.	No discharge of pollutants that imparts color or turbidity to the water that impairs designated uses. No discharge may increase color by more than 20 cpu; collectively all discharges may not increase color by more than 40 cpu.	No such classification.	**Color**: None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages. **Turbidity** - No increase that will cause a substantial visible contrast to natural conditions.	**Color**: None in such concentrations that would impair any usages specifically assigned to this class. **Turbidity**: Not to exceed 10 NTU over natural background.	No such classification.
Bacteria (Count/100ml)	**For bathing wate**r, the geometric mean of the indicated bacterial densities should not exceed one or the other of the following: E. coli 126/100ml; or enterococci 33/100ml.	See above.	**Fecal Coliform:** Shall not exceed geometric mean of 1000/100 ml, nor shall 10% of samples exceed 2000/100 ml.	**E. coli:** Between May 15 and September 30th, the number of E. coli of human origin may not exceed a geometric mean of 142/100 ml, or an instantaneous level of 949/100 ml.	No such classification.	**Total Coliforms:** The monthly median value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 2400/100 ml and 5000/100 ml, respectively. **Fecal Coliform:** The monthly geometric mean, from a minimum of five examinations, shall not exceed 200/100 ml.	**Total coliform:** None in such concentrations that would impair any usages specifically assigned to this class.	No such classification.
Taste and Odor	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity.	See above.	None in such concentrations or combinations that are aesthetically objectionable, that would impair any use assigned to this Class, or that would cause tainting or undesirable flavors in the edible portions of aquatic life.	No discharge of pollutants that imparts taste is allowed.	No such classification.	None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.	None in such concentrations that would impair an usages specifically assigned to this class nor cause taste or odor in edible portions of fish.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
pH	**Aquatic Life**: 6.5-9; **Domestic Water Supplies**: 5-9	See above.	Shall be in the range 6.5-9.0 and shall not change more than 1 unit outside of the naturally occurring range. There shall be no change from background conditions that would impair any use assigned to this Class.	6.0-8.5	No such classification.	Shall not be less than 6.5 nor more than 8.5.	6.5-9.0 or as naturally occurs.	No such classification.
Temperature	For any time of year, there are two upper limiting temperatures for a location (based on the important sensitive species found there at that time): (1) One limit consists of a maximum temperature for short exposures that is time dependent and is given by a species-specific equation; (2) the second value is a limit on the weekly average temperature (see Gold Book).	See above.	Shall not exceed 85 degrees F nor shall the rise due to a discharge exceed 5 degrees F. Natural seasonal and daily variations shall be maintained. There shall be no changes from background conditions that would impair any use assigned to this Class, including the site-specific limits necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.	Discharges shall not cause greater than 5 degree F increase, nor greater than 0.5 degrees F when ambient temperature exceeds national ambient water quality criteria for indigenous species, and not to exceed 85 degrees F maximum.	No such classification.	All thermal discharges to the waters of the State shall ensure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. The natural seasonal temperature cycle shall be retained. Annual spring and fall temperature changes shall be gradual. Large day-to-day temperature fluctuations due to heat of artificial origin shall be avoided. Detailed criteria for specific types of waters are given in Part 704 of the Regulation.	Shall not raise the temperature of the receiving waters above the recommended limit on the most sensitive receiving water use nor cause the growth of undesirable or nuisance species of biota and in no cases exceed 83 degrees F. Heated discharges into designated cold water habitats shall not raise the temperature above 68 degrees F outside an established thermal mixing zone. In no case shall the temperature of the receiving water be raised more than 4 degrees F.	No such classification.
Silt or Sand Deposits	N/A	See above.	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Chemical Constituents	N/A	See above.	Free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	N/A	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See part 703.5, table 1 for standards for specific substances.	**A.**) None in concentrations or combinations that could be harmful to humans, fish and wildlife for the most sensitive and governing water class use, or unfavorably alter the biota, or which would make the waters unsafe or unsuitable for fish and wildlife or their propagation, impair the waters for any other existing or designated use. None in such concentrations that would exceed the Water Quality Criteria and Guidelines found in appendix B. **B.**) The ambient concentration of a pollutant in a water body shall not exceed the Ambient Water Quality Criteria and Guidelines, (Appendix B) for the protection of aquatic organisms from acute or chronic effects, unless the criteria or guidelines are modified by the Director in accordance with the terms and conditions provided in the RI DEM Site Specific Aquatic Life Water Quality Criteria Development Policy.	No such classification.
Phosphorus	0.10 µg/l	See above.	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	N/A	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best use.	Average Total Phosphorous shall not exceed 0.025 mg/l in any lake, pond, kettlehole or reservoir, and average Total phosphorus in tributaries at the point where they enter such bodies of water shall not cause exceedance of this phosphorus criteria, except as naturally occurs, unless the director determines, on a site specific basis, that a different value for phosphorous is necessary to prevent cultural eutrophication. New discharges of wastes containing phosphates will not be permitted into or immediately upstream of lakes and ponds. Phosphates shall be removed from existing discharges to the extent that such removal is or may become technically and reasonably feasible.	No such classification.
Nitrate - N	10,000 µg/l	See above.	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	**For human health:** 10,000 µg/l for consumption of water and organisms.	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best use.	N/A	No such classification.
Phenol	21,000 µg/l (human health for consumption of water and organism).	See above.	21,000 µg/l for human health for consumption of water and organisms	Maximum concentration of 10,200 µg/l; continuous concentration of 2,560 µg/l. For human health: 21,000 µg/l for consumption of water and organisms and 460,000 µg/l for consumption of organisms.	No such classification.	N/A	**Aquatic Life**: Acute - 251 µg/L, Chronic - 5.6 µg/L **Human Health**: Consumption of water and fish - 21 mg/l, Consumption of fish only - 4600 mg/l.	No such classification.
Total Dissolved Solids	250,000 µg/l (human health for consumption of water and organism).	See above.	N/A	N/A	No such classification.	Shall be kept as low as practicable to maintain the best usage of waters but in no case shall it exceed 500 mg/l.	N/A	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Substances Potentially Toxic	N/A	See above.	All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	N/A	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See Table 1 of part 703.5 of the Regulation for specific standards.	Criteria for specific substances are listed in Table 1 in Appendix B of the Regulation. To protect aquatic life, the one hour average concentration of a pollutant should not exceed the acute criteria more than once every three years on the average. An exclusion to this rule are the pesticides and PCBs acute criteria, which are considered instantaneous values. The four day average concentration of a pollutant should not exceed the chronic criteria more than once every three years on the average. These aquatic life criteria shall be achieved in all waters, except mixing zones, regardless of the waters' classification.	No such classification.
Radioactivity	N/A	See above.	All surface waters shall be free from radioactive substances in concentrations or combinations that would be harmful to human, animal, or aquatic life, or the most sensitive designated use; result in radionuclides in aquatic life exceeding the recommended limits for consumption by humans; or exceed MA Drinking Water Regulations.	Discharge of pollutants may not impart radioactivity that cause those waters to be unsuitable for their designated uses.	No such classification.	N/A	The level of radioactive materials in all waters shall not be in concentrations or combinations which will likely be harmful to humans, fish, wildlife, or result in concentrations in organisms producing undesirable conditions.	No such classification.
Gross Beta	N/A	See above.	The concentration which produces an annual dose of 4 millirems/yr.	N/A	No such classification.	N/A	N/A	No such classification.
Radium 226	N/A	See above.	5 pCi/l	N/A	No such classification.	N/A	N/A	No such classification.
Mixing Zones	Quality for life within a mixing zone should be such that the 96- hour LC50 for biota significant to the indigenous aquatic community is not exceeded; the mixing zone should be free from effluent substances that will settle to form objectionable deposits free from effluent-associated materials that float to form unsightly masses, and free from effluent-associated substances that produce objectionable color, odor, or turbidity.	See above.	Mixing zones shall be limited to an area or volume as small as feasible. Mixing zones shall not interfere with the migration or free movement of fish or other aquatic life. Mixing zones shall not create nuisance conditions, accumulate pollutants in sediments or biota in toxic amounts or otherwise diminish the existing or designated uses of the segment disproportionately.	Established on a case-by-case basis.	No such classification.	**For thermal mixing zones**: the department shall specify definable, numerical limits for all mixing zones. Conditions in the mixing zone shall not be lethal in contravention of water quality standards to aquatic biota which may enter the zone. The location of mixing zones for thermal discharges shall not interfere with spawning areas, nursery areas, and fish migration routes. **For non-thermal mixing zones**: Within mixing zones, water quality standards for pollutants are expected to be exceeded, potentially impairing habitat usability for fish and benthic communities. Detailed guidelines can be found in TOGS 1.3.1	**All mixing zones:** Meet criteria for aesthetics, in accordance with rule 8.D.(1).b. Limited to an area/ volume that will prevent interference with existing and designated uses in the waterbody segment and beyond. Allow appropriate zone of passage for fish and organisms, prohibit lethality to organisms passing through zone, and protect for spawning/nursery habitat. Not allow substances to accumulate in sediments, fish, wildlife or food chains **Thermal:** Where thermal zones are allowed by the Director, the zone will be limited to no more than 1/4 of the cross sectional area and /or volume of river flow, stream or estuary, leaving at least 3/4 free as a zone of passage. **Non-thermal:** The Director may recognize a limited acute and/or chronic mixing zone (s) on a case-by-case basis. The locations, size ad shape shall be provided for the maximum protection of fish and wildlife.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Class D Waters								
Aesthetics	All waters free from substances attributable to wastewater or other discharges that: settle to form objectionable deposits; float as debris, scum, oil, or other matter to form nuisances; produce objectionable color, odor, taste, or turbidity; injure or are toxic or produce adverse physiological responses in humans, animals or plants; and produce undesirable or nuisance aquatic life.	See below	No such classification.	No such classification.	No such classification.	No taste, odor, or odor-producing, toxic, or other deleterious substances in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. See section 703.5, table 1 in the Regulation for standards for specific substances.	No such classification.	No such classification.
Aquatic Life	N/A	See below	No such classification.	No such classification.	No such classification.	See section 703.5, table 1 for standards for specific substances.	No such classification.	No such classification.
Dissolved Oxygen (DO)	**Cold Water Criteria**: 30 day mean 6.5 mg/l. **Warm Water Criteria**: 30 day mean 5.5 mg/l.	Not meeting one or more standards consistently due to problems that cannot be resolved by current technology.	No such classification.	No such classification.	No such classification.	Shall not be less than 3 mg/l at any time.	No such classification.	No such classification.
Sludge Deposits, Solid Refuse, Floating Solids, Oil, Grease and Scum	**For domestic water supply**: Virtually free from oil and grease, particularly from the tastes and odors that emanate from petroleum products. **For aquatic life**: (1) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater or marine species, (2) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed, (3) Surface waters shall be virtually free from floating non-petroleum oils of vegetable or animal origin, as well as petroleum derived oils.	See above.	No such classification.	No such classification.	No such classification.	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.	No such classification.	No such classification.
Color and Turbidity	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity. **Color**: Waters shall be virtually free from substances producing objectionable color for aesthetic purposes; the source of supply should not exceed 75 color units for domestic water supplies; increased color should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from seasonally established norm for aquatic life.	See above.	No such classification.	No such classification.	No such classification.	**Color**: None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages. **Turbidity** - No increase that will cause a substantial visible contrast to natural conditions.	No such classification.	No such classification.
Bacteria (Count/100ml)	**For bathing water**, the geometric mean of the indicated bacterial densities should not exceed one or the other of the following: E. coli 126/100ml; or enterococci 33/100ml.	See above.	No such classification.	No such classification.	No such classification.	**Total Coliforms:** The monthly median value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 2400/100 ml and 5000/100 ml, respectively. **Fecal Coliform:** The monthly geometric mean, from a minimum of five examinations, shall not exceed 200/100 ml.	No such classification.	No such classification.
Taste and Odor	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity.	See above.	No such classification.	No such classification.	No such classification.	None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.	No such classification.	No such classification.
pH	**Aquatic Life**: 6.5-9; **Domestic Water Supplies**: 5-9	See above.	No such classification.	No such classification.	No such classification.	Shall not be less than 6.0 nor more than 9.5.	No such classification.	No such classification.
Temperature	For any time of year, there are two upper limiting temperatures for a location (based on the important sensitive species found there at that time): (1) One limit consists of a maximum temperature for short exposures that is time dependent and is given by a species-specific equation; (2) the second value is a limit on the weekly average temperature (see Gold Book).	See above.	No such classification.	No such classification.	No such classification.	All thermal discharges to the waters of the State shall ensure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. The natural seasonal temperature cycle shall be retained. Annual spring and fall temperature changes shall be gradual. Large day-to-day temperature fluctuations due to heat of artificial origin shall be avoided. Detailed criteria for specific types of waters are given in Part 704 of the Regulation.	No such classification.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Chemical Constituents	N/A	See above.	No such classification.	No such classification.	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See part 703.5, table 1 for standards for specific substances.	No such classification.	No such classification.
Phosphorus	0.10 µg/l	See above.	No such classification.	No such classification.	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best use.	No such classification.	No such classification.
Nitrate - N	10,000 µg/l	See above.	No such classification.	No such classification.	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best use.	No such classification.	No such classification.
Phenol	21,000 µg/l (human health for consumption of water and organism).	See above.	No such classification.	No such classification.	No such classification.	N/A	No such classification.	No such classification.
Substances Potentially Toxic	N/A	See above.	No such classification.	No such classification.	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See Table 1 of part 703.5 of the Regulation for specific standards.	No such classification.	No such classification.
Mixing Zones	Quality for life within a mixing zone should be such that the 96- hour LC50 for biota significant to the indigenous aquatic community is not exceeded; the mixing zone should be free from effluent substances that will settle to form objectionable deposits free from effluent-associated materials that float to form unsightly masses, and free from effluent-associated substances that produce objectionable color, odor, or turbidity.	See above.	No such classification.	No such classification.	No such classification.	The department shall specify definable, numerical limits for all mixing zones. Conditions in the mixing zone shall not be lethal in contravention of water quality standards to aquatic biota which may enter the zone. The location of mixing zones for thermal discharges shall not interfere with spawning areas, nursery areas, and fish migration routes.	No such classification.	No such classification.
Class SA Waters								
Aesthetics	All waters free from substances attributable to wastewater or other discharges that: settle to form objectionable deposits; float as debris, scum, oil, or other matter to form nuisances; produce objectionable color, odor, taste, or turbidity; injure or are toxic or produce adverse physiological responses in humans, animals or plants; and produce undesirable or nuisance aquatic life.	Uniformly excellent.	All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste, or turbidity, or produce undesirable or nuisance species. Class SA waters shall have excellent aesthetic value.	N/A	No such classification.	No taste, odor, or odor-producing, toxic, or other deleterious substances in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. See section 703.5, table 1 in the Regulation for standards for specific substances.	All waters shall be free from pollutants in concentrations or combinations that: Settle to form deposits that are unsightly, putrescent, or odorous; Float as debris, oil, grease, scum or other floating material attributable to wastes; Produce odor or taste or change the color or physical, chemical or biological conditions; or Result in the dominance of species of fish and wildlife; To such a degree as to create a nuisance or interfere with the existing or designated uses.	No such classification.
Aquatic Life	N/A	N/A	N/A	As naturally occurs.	No such classification.	See section 703.5, table 1 for standards for specific substances.	At a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that: adversely affect the composition of fish and wildlife; adversely affect the physical, chemical, or biological integrity of the habitat; interfere with the propagation of fish and wildlife; or adversely alter the life cycle functions, uses, processes and activities of fish and wildlife.	No such classification.
Dissolved Oxygen (DO)	**Cold Water Criteria**: 30 day mean 6.5 mg/l. **Warm Water Criteria**: 30 day mean 5.5 mg/l.	Not less than 6.0 mg/L at any time in the nearshore water of Long Island Sound, including harbors, embayments, and estuarine tributaries. Not less than 6.0 mg/L at any time in the offshore waters of Long Island Sound, above the seasonal pycnocline and throughout the sound when no pycnocline is established. Not less than 3.5 mg/L for offshore waters within and below the seasonal pycnocline. Cumulative periods of dissolved oxygen in the 3.5-4.8 mg/L range shall not exceed specified exposure parameters.	Shall not be less than 6.0 mg/l unless background conditions are lower. Natural seasonal and daily variations above this level shall be maintained; levels shall not be lowered below 75% of saturation due to discharge. Site-specific criteria may apply where background conditions are lower than specified levels or to the bottom stratified layer where the Department determines that designated uses are not impaired.	As naturally occurs.	No such classification.	Shall not be less than 5.0 mg/l at any time.	Not less than 6 mg/l at any place or time, except as naturally occurs. Normal seasonal and diurnal variations which result in insitu concentrations above 6 mg/l not associated with cultural eutrophication will be maintained in accordance with the Antidegradation Implementation Policy.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Sludge Deposits, Solid Refuse, Floating Solids, Oil, Grease and Scum	**For aquatic life**: (1) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater or marine species, (2) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed, (3) Surface waters shall be virtually free from floating non-petroleum oils of vegetable or animal origin, as well as petroleum derived oils.	None other than natural origin.	Free from oil and grease, petrochemicals and other volatile or synthetic organic pollutants. Free from pollutants in concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom.	Waters shall be free from floating substances that impair the characteristics and designated uses ascribed to their class.	No such classification.	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease. No sludge in any amounts.	None allowable.	No such classification.
Color and Turbidity	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity. **Color**: Waters shall be virtually free from substances producing objectionable color for aesthetic purposes; the source of supply should not exceed 75 color units for domestic water supplies; increased color should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from seasonally established norm for aquatic life.	**Color** - None other than natural origin. **Turbidity** - Shall not exceed 5 NTU over ambient levels and none exceeding levels necessary to protect and maintain all designated uses (BMPs are to be used).	These waters shall be from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class.	No discharge of pollutants that imparts color or turbidity to the water is allowed.	No such classification.	**Color**: None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages. **Turbidity** - No increase that will cause a substantial visible contrast to natural conditions.	**Color:** None in such concentrations that would impair any usages specifically assigned to this class. Turbidity: Not to exceed 5 NTU over background.	No such classification.
Bacteria (Count/100ml)	**For marine recreation: Enterococci:** Geometric mean shall not exceed 35/100 ml. **For shellfish harvesting: Fecal coliform**: Median concentration not to exceed geo14 MPN/100 ml and 10% of samples shall not exceed 43 MPN/100 ml.	**Fecal Coliform: Geometric mean less than 14/100 ml, 90% of samples less than 43/100 ml. Enterococci: Designated swimming: Geometric mean less than 35/100 ml, Single sample maximum 104/100 ml; All other uses: Geometric mean less than 35/100 ml, Single sample maximum 500/100 ml.**	**Fecal Coliform**: For shellfish waters, shall not exceed geometric mean MPN of 14/100 ml and 10% of samples shall not exceed MPN of 43/100 ml. In other waters, shall not exceed a geometric mean of 200/100 ml and 10% of samples shall not exceed 400/100 ml.	As naturally occurs.	No such classification.	**Total Coliforms:** The median MPN value in any series of representative samples shall not be in excess of 70/100 ml.	**Total Coliform:** Not to exceed a geometric mean MPN value of 70/100 ml and not more than 10% of the samples shall exceed an MPN of 330/100 ml for a 3-tube decimal dilution. **Fecal Coliform:** Not to exceed a geometric mean MPN value of 14/100 ml and not more than 10% of the samples shall exceed an MPN of 49/100 ml for a 3-tube decimal dilution.	No such classification.
Taste and Odor	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity.	As naturally occurs.	None other than of natural origin.	No discharge of pollutants that imparts taste is allowed.	No such classification.	None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.	None allowable except as naturally occurs.	No such classification.
pH	**Marine Aquatic Life**: 6.5-8.5.	6.8-8.5	Shall be in the range 6.5-8.5 and not more than 0.2 standard units outside the naturally occurring range. There shall be no change from background conditions that would impair any use assigned to this class.	7.0-8.5	No such classification.	The normal range shall not be extended by more than 0.1 unit.	6.5-8.5 but not more than 0.2 units outside of the normally occurring range.	No such classification.
Temperature	The maximum acceptable increase in weekly average temperature resulting from artificial sources in 1 degree C during all seasons. Daily temperature cycles characteristic of the water body segment should not be altered in either amplitude or frequency.	There shall be no changes from natural conditions that would impair any existing or designated uses assigned to this class and, in no case exceed 83 degrees F, or in any case raise the temperature of the receiving water more than 4 degrees F. During the period including July, August, and September, the temperature of the receiving water shall not be raised more than 1.5 degree F unless it can be shown that spawning and growth of indigenous organisms will not be significantly affected.	Shall not exceed 85 degrees F nor a maximum daily mean of 80 degrees F and the rise in temperature due to discharge shall not exceed 1.5 degrees F. Natural seasonal and daily variations shall be maintained, there shall be no change from background that would impair any uses assigned to this class including site-specific limits necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.	As naturally occurs.	No such classification.	All thermal discharges to the waters of the State shall ensure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. The natural seasonal temperature cycle shall be retained. Annual spring and fall temperature changes shall be gradual. Large day-to-day temperature fluctuations due to heat of artificial origin shall be avoided. Detailed criteria for specific types of waters are given in Part 704 of the Regulation.	None except where the increase will not exceed the recommended limit on the most sensitive receiving water use and in no case exceed 83 degrees F nor raise the normal temperature more than 1.6 degrees F, June 16 through September and not more than 4 degrees F from October through June 16. All measurements shall be made at the boundary of such mixing zones as is found to be reasonable by the Director.	No such classification.
Silt or Sand Deposits	N/A	None other than of natural origin except as may result form normal agricultural, road maintenance, construction activity or dredging activity, or discharge of dredged or fill materials provided all reasonable controls or BMPs are used.	N/A	N/A	No such classification.	N/A	N/A	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Chemical Constituents	N/A	None in concentrations or combinations which would be harmful to designated uses. Refer to Standards #s 10, 11, 12, 13, 17, and 19.	Free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	N/A	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See part 703.5, table 1 for standards for specific substances.	**A.**) None in concentrations or combinations that could be harmful to humans, fish and wildlife for the most sensitive and governing water class use, or unfavorably alter the biota, or which would make the waters unsafe or unsuitable for fish and wildlife or their propagation, impair the waters for any other existing or designated use. None in such concentrations that would exceed the Water Quality Criteria and Guidelines found in appendix B. **B.**) The ambient concentration of a pollutant in a water body shall not exceed the Ambient Water Quality Criteria and Guidelines, (Appendix B) for the protection of aquatic organisms from acute or chronic effects, unless the criteria or guidelines are modified by the Director in accordance with the terms and conditions provided in the RI DEM Site Specific Aquatic Life Water Quality Criteria Development Policy.	No such classification.
Phosphorus	0.10 µg/l	N/A	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	Continuous concentration of 0.1 µg/l	Shall contain no phosphorus unless naturally occurring.	None in amounts that will result in growth of algae, weeds, and slimes that will impair the waters for their best usages.	None in such concentrations that would impair any usages specifically assigned to said class, or cause undesirable or nuisance aquatic species associated with cultural eutrophication. Shall not exceed site-specific limits if deemed necessary by the Director to prevent or minimize accelerated or cultural eutrophication. Total phosphorus, nitrates and ammonia may be assigned site-specific permit limits based on reasonable Best Available Technologies. Where waters have low tidal flushing rates, applicable treatment to prevent or minimize accelerated or cultural eutrophication may be required for regulated NPS activities.	No such classification.
Sulfates	250,000 µg/l	N/A	250,000 µg/l	N/A	No such classification.	N/A	N/A	No such classification.
Nitrate - N	10,000 µg/l	N/A	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	N/A	No such classification.	None in amounts that will result in growth of algae, weeds, and slimes that will impair the waters for their best usages.	Nitrates and ammonia may be assigned site-specific permit limits based on reasonable Best Available Technologies.	No such classification.
Phenol	21,000 µg/l (human health for consumption of water and organism).	**For human health:** 4600 mg/l for consumption of organisms and 21 mg/l for consumption of water and organisms.	21,000 µg/l for human health for consumption of water and organisms	Maximum concentration of 5,800 µg/l	No such classification.	N/A	**Human Health**: Consumption of fish only - 4600 mg/l.	No such classification.
Total Dissolved Solids	250,000 µg/l (human health for consumption of water and organism).	N/A	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Substances Potentially Toxic	N/A	Surface waters shall be free from chemical constituents in concentrations of combinations which will or can reasonably be expected to result in acute or chronic toxicity to aquatic organisms.	All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	No toxics in toxic amounts.	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See Table 1 of part 703.5 of the Regulation for specific standards.	Criteria for specific substances are listed in Table 1 in Appendix B of the Regulation. To protect aquatic life, the one hour average concentration of a pollutant should not exceed the acute criteria more than once every three years on the average. An exclusion to this rule are the pesticides and PCBs acute criteria, which are considered instantaneous values. The four day average concentration of a pollutant should not exceed the chronic criteria more than once every three years on the average. These aquatic life criteria shall be achieved in all waters, except mixing zones, regardless of the waters' classification.	No such classification.
Radioactivity	N/A	Discharge of radioactive materials in concentrations or combinations which would be harmful to human, animal or aquatic life shall not be allowed. Applicable criteria can be found in Title10 Part 20 of the Code of Federal Regulations.	All surface waters shall be free from radioactive substances in concentrations or combinations that would be harmful to human, animal, or aquatic life, or the most sensitive designated use; result in radionuclides in aquatic life exceeding the recommended limits for consumption by humans; or exceed MA Drinking Water Regulations.	N/A	No such classification.	N/A	The level of radioactive materials in all waters shall not be in concentrations or combinations which will likely be harmful to humans, fish, wildlife, or result in concentrations in organisms producing undesirable conditions.	No such classification.
Gross Beta	N/A	N/A	N/A	N/A	No such classification.	N/A	N/A	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Radium 226	N/A	N/A	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Strontium 90	N/A	N/A	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Mixing Zones	Quality for life within a mixing zone should be such that the 96- hour LC50 for biota significant to the indigenous aquatic community is not exceeded; the mixing zone should be free from effluent substances that will settle to form objectionable deposits free from effluent-associated materials that float to form unsightly masses, and free from effluent-associated substances that produce objectionable color, odor, or turbidity.	Established on a case by case basis. Based on characteristics of the receiving waterbody, including sensitivity, and aquatic life. Refer to Standard # 10.	Mixing zones shall be limited to an area or volume as small as feasible. Mixing zones shall not interfere with the migration or free movement of fish or other aquatic life. Mixing zones shall not create nuisance conditions, accumulate pollutants in sediments or biota in toxic amounts or otherwise diminish the existing or designated uses of the segment disproportionately.	N/A	No such classification.	**For thermal mixing zones**: the department shall specify definable, numerical limits for all mixing zones. Conditions in the mixing zone shall not be lethal in contravention of water quality standards to aquatic biota which may enter the zone. The location of mixing zones for thermal discharges shall not interfere with spawning areas, nursery areas, and fish migration routes. **For non-thermal mixing zones**: Within mixing zones, water quality standards for pollutants are expected to be exceeded, potentially impairing habitat usability for fish and benthic communities. Detailed guidelines can be found in TOGS 1.3.1	**All mixing zones:** Meet criteria for aesthetics, in accordance with rule 8.D.(1).b. Limited to an area/ volume that will prevent interference with existing and designated uses in the waterbody segment and beyond. Allow appropriate zone of passage for fish and organisms, prohibit lethality to organisms passing through zone, and protect for spawning/nursery habitat. Not allow substances to accumulate in sediments, fish, wildlife or food chains **Thermal:** Where thermal zones are allowed by the Director, the zone will be limited to no more than 1/4 of the cross sectional area and /or volume of river flow, stream or estuary, leaving at least 3/4 free as a zone of passage. **Non-thermal:** The Director may recognize a limited acute and/or chronic mixing zone (s) on a case-by-case basis. The locations, size ad shape shall be provided for the maximum protection of fish and wildlife.	No such classification.
Class SB Waters								
Aesthetics	All waters free from substances attributable to wastewater or other discharges that: settle to form objectionable deposits; float as debris, scum, oil, or other matter to form nuisances; produce objectionable color, odor, taste, or turbidity; injure or are toxic or produce adverse physiological responses in humans, animals or plants; and produce undesirable or nuisance aquatic life.	Good to excellent.	All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste, or turbidity, or produce undesirable or nuisance species. Class SB waters shall have consistently good aesthetic value.	N/A	No such classification.	No taste, odor, or odor-producing, toxic, or other deleterious substances in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. See section 703.5, table 1 in the Regulation for standards for specific substances.	All waters shall be free from pollutants in concentrations or combinations that: Settle to form deposits that are unsightly, putrescent, or odorous; Float as debris, oil, grease, scum or other floating material attributable to wastes; Produce odor or taste or change the color or physical, chemical or biological conditions; or Result in the dominance of species of fish and wildlife; To such a degree as to create a nuisance or interfere with the existing or designated uses.	No such classification.
Aquatic Life	N/A	N/A	N/A	Discharges shall not cause adverse impact to estuarine and marine life in that the receiving waters shall be of sufficient quality to support all estuarine and marine species indigenous to the receiving water without detrimental changes in the resident biological community. There shall be no new discharges which would cause closure to open shellfish areas.	No such classification.	See section 703.5, table 1 for standards for specific substances.	At a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that: adversely affect the composition of fish and wildlife; adversely affect the physical, chemical, or biological integrity of the habitat; interfere with the propagation of fish and wildlife; or adversely alter the life cycle functions, uses, processes and activities of fish and wildlife.	No such classification.
Dissolved Oxygen (DO)	**Cold Water Criteria**: 30 day mean 6.5 mg/l. **Warm Water Criteria**: 30 day mean 5.5 mg/l.	Not less than 5.0 mg/L at any time in the nearshore water of Long Island Sound, including harbors, embayments, and estuarine tributaries. Not less than 5.0 mg/L at any time in the offshore waters of Long Island Sound, above the seasonal pycnocline and throughout the Sound when no pycnocline is established. Not less than 3.5 mg/L for offshore waters within and below the seasonal pycnocline. Cumulative periods of dissolved oxygen in the 3.5-4.8 mg/L range shall not exceed specified exposure parameters.	Shall not be less than 5.0 mg/l unless background conditions are lower. Natural seasonal and daily variations shall be maintained, levels shall not be lowered below 60% of saturation due to a discharge. Site-specific criteria may apply where background conditions are lower than specified levels or to the bottom stratified layer where the Department determines that designated uses are not met.	Not less than 85% saturation.	No such classification.	Shall not be less than 5.0 mg/l at any time.	Not less than 5 mg/l at any place or time, except as naturally occurs. Normal seasonal and diurnal variations which result in insitu concentrations above 5 mg/l not associated with cultural eutrophication will be maintained in accordance with the Antidegredation Implementation Policy.	No such classification.
Sludge Deposits, Solid Refuse, Floating Solids, Oil, Grease and Scum	**For aquatic life**: (1) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater or marine species, (2) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed, (3) Surface waters shall be virtually free from floating non-petroleum oils of vegetable or animal origin, as well as petroleum derived oils.	None except for small amounts that may result from discharge from grease waste treatment facility providing appropriate treatment and none exceeding levels necessary to protect and maintain all designated uses.	Free from oil and grease, petrochemicals and other volatile or synthetic organic pollutants. Free from pollutants in concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom.	Waters shall be free from floating substances that impair the characteristics and designated uses ascribed to their class.	No such classification.	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease. No sludge in any amounts.	None Allowable.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Color and Turbidity	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity. **Color**: Waters shall be virtually free from substances producing objectionable color for aesthetic purposes; the source of supply should not exceed 75 color units for domestic water supplies; increased color should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from seasonally established norm for aquatic life.	**Color** - None resulting in obvious discoloration of the surface water outside of any designated zone of influence. **Turbidity** - None other than of natural origin except as may result from normal agricultural, road maintenance, or construction activity, or discharge from a waste treatment facility providing appropriate treatment, dredging activity or discharge of dredged or fill materials provided all reasonable controls and Best Management Practices are used to control turbidity and none exceeding levels necessary to protect and maintain all designated uses.	These waters shall be from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class.	No discharge of pollutants that imparts color or turbidity to the water is allowed.	No such classification.	**Color**: None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages. **Turbidity** - No increase that will cause a substantial visible contrast to natural conditions.	**Color:** None in such concentrations that would impair any usages specifically assigned to this class. Turbidity: Not to exceed 10 NTU over natural background.	No such classification.
Bacteria (Count/100ml)	**For marine recreation: Enterococci:** Geometric mean shall not exceed 35/100 ml. **For shellfish harvesting: Fecal coliform**: Median concentration not to exceed geo14 MPN/100 ml and 10% of samples shall not exceed 43 MPN/100 ml.	**Fecal Coliform: Geometric mean less than 88/100 ml, 90% of samples less than 260/100 ml. Enterococci: Designated swimming: Geometric mean 35/100 ml, Single sample maximum 104/100 ml, All other recreational uses: Geometric mean 35/100 ml, Single sample maximum 500/100 ml.**	**Fecal Coliform:** For shellfish waters, shall not exceed a median or geometric mean MPN of 88/100 ml and 10% of samples shall not exceed an MPN of 260/100ml. For other waters, shall not exceed a geometric mean of 200/100 ml in any representative set of samples and 10% of samples shall not exceed 400/100 ml.	**Enterococci:** Between May 15 and September 30, the number of enterococcus bacteria of human origin in these waters may not exceed a geometric mean of 8/100 ml or an instantaneous level of 54/100 ml. **Total coliform**: The numbers of total coliform bacteria or other specified indicator organisms in samples representative of the waters in shellfish harvesting may not exceed the criteria recommended under National Shellfish Sanitation Program Manual of Operations.	No such classification.	**Total Coliforms:** The monthly median value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 2400/100 ml and 5000/100 ml respectively. **Fecal Coliform:** The monthly geometric mean, from a minimum of five examinations, shall not exceed 200/100 ml.	**Total Coliform:** Not to exceed a geometric mean MPN value of 700/100 ml and 10% of samples shall not exceed 2300/100 ml. **Fecal Coliform:** Not to exceed a median geometric mean MPN value of 50/100 ml and not more than 10% of the samples shall exceed a value of 500/100 ml.	No such classification.
Taste and Odor	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity.	As naturally occurs. None that would impair any use specifically assigned to this Class.	None in such concentrations or combinations that are aesthetically objectionable, that would impair any use assigned to this Class, or that would cause tainting or undesirable flavors in the edible portions of aquatic life.	No discharge of pollutants that imparts taste is allowed.	No such classification.	None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.	None in such concentrations that would impair any usages specifically assigned to this class nor cause taste or odor in edible portions of fish or shellfish.	No such classification.
pH	**Marine Aquatic Life**: 6.5-8.5.	6.8 - 8.5	Shall be in the range 6.5-8.5 and not more than 0.2 units outside of normally occurring range. There shall be no change from background conditions that would impair any use assigned to this class.	7.0-8.5	No such classification.	The normal range shall not be extended by more than 0.1 unit.	6.5-8.5 but not more than 0.2 units outside of the normally occurring range.	No such classification.
Temperature	The maximum acceptable increase in weekly average temperature resulting from artificial sources in 1 degree C during all seasons. Daily temperature cycles characteristic of the water body segment should not be altered in either amplitude or frequency.	There shall be no changes from natural conditions that would impair any existing or designated uses assigned to this class and, in no case exceed 83 degrees F, or in any case raise the temperature of the receiving water more than 4 degrees F. During the period including July, August, and September, the temperature of the receiving water shall not be raised more than 1.5 degree F unless it can be shown that spawning and growth of indigenous organisms will not be significantly affected.	Shall not exceed 85 degrees F nor a maximum daily mean of 80 degrees F, and the rise in temperature due to a discharge shall not exceed 1.5 degrees during the summer months nor 4 degrees F during the winter months. Natural seasonal and daily variations shall be maintained; there shall be no changes from background that would impair any uses assigned to this class including site-specific limits to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.	Discharges shall not cause the monthly mean of the daily maximum ambient temperature to be raised by more than 4 degrees F nor more than 1.5 degrees F from June 1 to September 1, not to exceed 85 degrees maximum.	No such classification.	All thermal discharges to the waters of the State shall ensure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. The natural seasonal temperature cycle shall be retained. Annual spring and fall temperature changes shall be gradual. Large day-to-day temperature fluctuations due to heat of artificial origin shall be avoided. Detailed criteria for specific types of waters are given in Part 704 of the Regulation.	None except where the increase will not exceed the recommended limit on the most sensitive receiving water use and in no case exceed 83 degrees F nor raise the normal temperature more than 1.6 degrees F, June 16 through September and not more than 4 degrees F from October through June 16. All measurements shall be made at the boundary of such mixing zones as is found to be reasonable by the Director.	No such classification.
Silt or Sand Deposits	N/A	None other than of natural origin except as may result form normal agricultural, road maintenance, construction activity or dredging activity, or discharge of dredged or fill materials provided all reasonable controls or BMPs are used.	N/A	N/A	No such classification.	N/A	N/A	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Chemical Constituents	N/A	None in concentrations or combinations which would be harmful to designated uses. Refer to Standards #s 10, 11, 12, 13, 17, and 19.	Free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	N/A	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See part 703.5, table 1 for standards for specific substances.	**A.**) None in concentrations or combinations that could be harmful to humans, fish and wildlife for the most sensitive and governing water class use, or unfavorably alter the biota, or which would make the waters unsafe or unsuitable for fish and wildlife or their propagation, impair the waters for any other existing or designated use. None in such concentrations that would exceed the Water Quality Criteria and Guidelines found in appendix B. **B.**) The ambient concentration of a pollutant in a water body shall not exceed the Ambient Water Quality Criteria and Guidelines, (Appendix B) for the protection of aquatic organisms from acute or chronic effects, unless the criteria or guidelines are modified by the Director in accordance with the terms and conditions provided in the RI DEM Site Specific Aquatic Life Water Quality Criteria Development Policy.	No such classification.
Phosphorus	0.10 µg/l	N/A	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	Continuous concentration of 0.1 µg/l	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best use.	None in such concentrations that would impair any usages specifically assigned to said class, or cause undesirable or nuisance aquatic species associated with cultural eutrophication. Shall not exceed site-specific limits if deemed necessary by the director to prevent or minimize accelerated or cultural eutrophication. Total phosphorus, nitrates and ammonia may be assigned site-specific permit limits based on reasonable Best Available Technologies. Where waters have low tidal flushing rates, applicable treatment to prevent or minimize accelerated or cultural eutrophication ma be required for regulated NPS activities.	No such classification.
Sulfates	250,000 µg/l	N/A	250,000 µg/l	N/A	No such classification.	N/A	N/A	No such classification.
Nitrate - N	10,000 µg/l	N/A	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	N/A	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best use.	Nitrates and ammonia may be assigned site-specific permit limits based on reasonable Best Available Technologies.	No such classification.
Phenol	21,000 µg/l (human health for consumption of water and organism).	**For human health:** 4600 mg/l for consumption of organisms and 21 mg/l for consumption of water and organisms.	21,000 µg/l for human health for consumption of water and organisms	Maximum concentration of 5,800 µg/l	No such classification.	N/A	**Human Health**: Consumption of fish only - 4600 mg/l.	No such classification.
Total Dissolved Solids	250,000 µg/l (human health for consumption of water and organism).	N/A	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Substances Potentially Toxic	N/A	Surface waters shall be free from chemical constituents in concentrations of combinations which will or can reasonably be expected to result in acute or chronic toxicity to aquatic organisms.	All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	No toxics in toxic amounts.	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See Table 1 of part 703.5 of the Regulation for specific standards.	Criteria for specific substances are listed in Table 1 in Appendix B of the Regulation. To protect aquatic life, the one hour average concentration of a pollutant should not exceed the acute criteria more than once every three years on the average. An exclusion to this rule are the pesticides and PCBs acute criteria, which are considered instantaneous values. The four day average concentration of a pollutant should not exceed the chronic criteria more than once every three years on the average. These aquatic life criteria shall be achieved in all waters, except mixing zones, regardless of the waters' classification.	No such classification.
Radioactivity	N/A	Discharge of radioactive materials in concentrations or combinations which would be harmful to human, animal or aquatic life shall not be allowed. Applicable criteria can be found in Title10 Part 20 of the Code of Federal Regulations.	All surface waters shall be free from radioactive substances in concentrations or combinations that would be harmful to human, animal, or aquatic life, or the most sensitive designated use; result in radionuclides in aquatic life exceeding the recommended limits for consumption by humans; or exceed MA Drinking Water Regulations.	Discharge of pollutants may not impart radioactivity that cause those waters to be unsuitable for their designated uses.	No such classification.	N/A	The level of radioactive materials in all waters shall not be in concentrations or combinations which will likely be harmful to humans, fish, wildlife, or result in concentrations in organisms producing undesirable conditions.	No such classification.
Gross Beta	N/A	N/A	N/A	N/A	No such classification.	N/A	N/A	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Radium 226	N/A	N/A	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Strontium 90	N/A	N/A	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Mixing Zones	Quality for life within a mixing zone should be such that the 96- hour LC50 for biota significant to the indigenous aquatic community is not exceeded; the mixing zone should be free from effluent substances that will settle to form objectionable deposits free from effluent-associated materials that float to form unsightly masses, and free from effluent-associated substances that produce objectionable color, odor, or turbidity.	Established on a case by case basis. Based on characteristics of the receiving waterbody, including sensitivity, and aquatic life. Refer to Standard # 10.	Mixing zones shall be limited to an area or volume as small as feasible. Mixing zones shall not interfere with the migration or free movement of fish or other aquatic life. Mixing zones shall not create nuisance conditions, accumulate pollutants in sediments or biota in toxic amounts or otherwise diminish the existing or designated uses of the segment disproportionately.	Established on a case-by-case basis.	No such classification.	**For thermal mixing zones**: the department shall specify definable, numerical limits for all mixing zones. Conditions in the mixing zone shall not be lethal in contravention of water quality standards to aquatic biota which may enter the zone. The location of mixing zones for thermal discharges shall not interfere with spawning areas, nursery areas, and fish migration routes. **For non-thermal mixing zones**: Within mixing zones, water quality standards for pollutants are expected to be exceeded, potentially impairing habitat usability for fish and benthic communities. Detailed guidelines can be found in TOGS 1.3.1	**All mixing zones:** Meet criteria for aesthetics, in accordance with rule 8.D.(1).b. Limited to an area/volume that will prevent interference with existing and designated uses in the waterbody segment and beyond. Allow appropriate zone of passage for fish and organisms, prohibit lethality to organisms passing through zone, and protect for spawning/nursery habitat. Not allow substances to accumulate in sediments, fish, wildlife or food chains **Thermal:** Where thermal zones are allowed by the Director, the zone will be limited to no more than 1/4 of the cross sectional area and /or volume of river flow, stream or estuary, leaving at least 3/4 free as a zone of passage. **Non-thermal:** The Director may recognize a limited acute and/or chronic mixing zone (s) on a case-by-case basis. The locations, size ad shape shall be provided for the maximum protection of fish and wildlife.	No such classification.
Class SC Waters								
Aesthetics	All waters free from substances attributable to wastewater or other discharges that: settle to form objectionable deposits; float as debris, scum, oil, or other matter to form nuisances; produce objectionable color, odor, taste, or turbidity; injure or are toxic or produce adverse physiological responses in humans, animals or plants; and produce undesirable or nuisance aquatic life.	See Below	All surface waters shall be free from pollutants in concentrations or combinations that settle to form objectionable deposits; float as debris, scum or other matter to form nuisances; produce objectionable odor, color, taste, or turbidity, or produce undesirable or nuisance species. Class SC waters shall have good aesthetic value.	N/A	No such classification.	No taste, odor, or odor-producing, toxic, or other deleterious substances in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. See section 703.5, table 1 in the Regulation for standards for specific substances.	All waters shall be free from pollutants in concentrations or combinations that: Settle to form deposits that are unsightly, putrescent, or odorous; Float as debris, oil, grease, scum or other floating material attributable to wastes; Produce odor or taste or change the color or physical, chemical or biological conditions; or Result in the dominance of species of fish and wildlife; To such a degree as to create a nuisance or interfere with the existing or designated uses.	No such classification.
Aquatic Life	N/A	See Below	N/A	Discharges may cause some changes to estuarine and marine life provided that the receiving waters are of sufficient quality to support all species of fish indigenous to the receiving waters and maintain the structure and function of the resident biological community.	No such classification.	See section 703.5, table 1 for standards for specific substances.	At a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that: adversely affect the composition of fish and wildlife; adversely affect the physical, chemical, or biological integrity of the habitat; interfere with the propagation of fish and wildlife; or adversely alter the life cycle functions, uses, processes and activities of fish and wildlife.	No such classification.
Dissolved Oxygen (DO)	**Cold Water Criteria**: 30 day mean 6.5 mg/l. **Warm Water Criteria**: 30 day mean 5.5 mg/l.	One or more water quality criteria not being consistently achieved for Class SA or SB. Conditions can be corrected by current technology. Class goal is always SA or SB.	Not less than 5.0 mg/l at least 16 hours out of any 24 hour period and not less than 4.0 mg/l at any time unless background conditions are lower. Natural seasonal daily variations above these levels shall be maintained; levels shall not be lowered below 50% of saturation due to a discharge. Site-specific criteria may apply where background conditions are lower than specified levels or the bottom stratified layer where the Department determines that designated uses are not impaired.	Not less than 70% of saturation.	No such classification.	Shall not be less than 5.0 mg/l at any time.	Not less than 5 mg/l at any place or time, except as naturally occurs. Normal seasonal and diurnal variations which result in insitu concentrations above 5 mg/l not associated with cultural eutrophication will be maintained in accordance with the Antidegredation Implementation Policy.	No such classification.
Sludge Deposits, Solid Refuse, Floating Solids, Oil, Grease and Scum	**For aquatic life**: (1) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater or marine species, (2) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed, (3) Surface waters shall be virtually free from floating non-petroleum oils of vegetable or animal origin, as well as petroleum derived oils.	See above.	Free from oil and grease, petrochemicals and other volatile or synthetic organic pollutants. Free from pollutants in concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom.	Waters shall be free from floating substances that impair the characteristics and designated uses ascribed to their class.	No such classification.	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease. No sludge in any amounts.	None in such amounts that would impair any usages specifically assigned to this class.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Color and Turbidity	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity. **Color**: Waters shall be virtually free from substances producing objectionable color for aesthetic purposes; the source of supply should not exceed 75 color units for domestic water supplies; increased color should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from seasonally established norm for aquatic life.	See above.	These waters shall be from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class.	No discharge of pollutants that imparts color or turbidity to the water is allowed.	No such classification.	**Color**: None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages. **Turbidity** - No increase that will cause a substantial visible contrast to natural conditions.	**Color:** None in such concentrations that would impair any usages specifically assigned to this class. Turbidity: Not to exceed 10 NTU over natural background.	No such classification.
Bacteria (Count/100ml)	**For marine recreation: Enterococci:** Geometric mean shall not exceed 35/100 ml. **For shellfish harvesting: Fecal coliform**: Median concentration not to exceed geo14 MPN/100 ml and 10% of samples shall not exceed 43 MPN/100 ml.	See above.	**Fecal Coliform**: Shall not exceed geometric mean of 100/100 ml, nor shall more than 10% of the samples exceed 2000/100 ml.	**Enterococci:** Between May 15 and September 30th, the number of Enterococcus bacteria of human origin may not exceed a geometric mean of 14/100 ml, or an instantaneous level of 94/100 ml. **Total coliform**: The number of total coliform bacteria or other specified indicator organisms in samples representative of the waters in restricted shellfish harvesting areas may not exceed the criteria recommended under the National Shellfish Sanitation Program Manual of Operations.	No such classification.	**Total Coliforms:** The monthly value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 2400/100 ml and 5000/1000 ml respectively. **Fecal Coliform:** The monthly geometric mean, from a minimum of five examinations, shall not exceed 200/100 ml.	**Total and fecal coliform**: None in such concentrations that would impair any usages specifically assigned to this class.	No such classification.
Taste and Odor	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity.	See above.	None in such concentrations or combinations that are aesthetically objectionable, that would impair any use assigned to this Class, or that would cause tainting or undesirable flavors in the edible portions of aquatic life.	No discharge of pollutants that imparts taste is allowed.	No such classification.	None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.	None in such concentrations that would impair any usages specifically assigned to this class nor cause taste or odor in edible portions of fish or shellfish.	No such classification.
pH	**Marine Aquatic Life**: 6.5-8.5.	See above.	Shall be in the range 6.5-9.0 standard units and not more than 0.5 standard units outside the naturally occurring range. There shall be no change from background conditions that would impair any use assigned to this class.	7.0-8.5	No such classification.	The normal range shall not be extended by more than 0.1 unit.	6.5-8.5 but not more than 0.2 units outside of the normally occurring range.	No such classification.
Temperature	The maximum acceptable increase in weekly average temperature resulting from artificial sources in 1 degree C during all seasons. Daily temperature cycles characteristic of the water body segment should not be altered in either amplitude or frequency.	See above.	Shall not exceed 85 degrees F nor shall the rise due to discharge exceed 5 degrees F. Natural seasonal and daily variations shall be maintained, there shall be no change from background conditions that would impair any use assigned to this class, including the site specific limits necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.	Discharges shall not cause the monthly mean of the daily maximum ambient temperature to be raised by more than 4 degrees F nor more than 1.5 degrees F from June 1 to September 1, not to exceed 85 degrees maximum.	No such classification.	All thermal discharges to the waters of the State shall ensure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. The natural seasonal temperature cycle shall be retained. Annual spring and fall temperature changes shall be gradual. Large day-to-day temperature fluctuations due to heat of artificial origin shall be avoided. Detailed criteria for specific types of waters are given in Part 704 of the Regulation.	None except where the increase will not exceed the recommended limit on the most sensitive receiving water use and in no case exceed 83 degrees F nor raise the normal temperature more than 1.6 degrees F, June 16 through September and not more than 4 degrees F from October through June 16. All measurements shall be made at the boundary of such mixing zones as is found to be reasonable by the Director.	No such classification.
Silt or Sand Deposits	N/A	See above.	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Chemical Constituents	N/A	See above.	Free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	N/A	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See part 703.5, table 1 for standards for specific substances.	**A.**) None in concentrations or combinations that could be harmful to humans, fish and wildlife for the most sensitive and governing water class use, or unfavorably alter the biota, or which would make the waters unsafe or unsuitable for fish and wildlife or their propagation, impair the waters for any other existing or designated use. None in such concentrations that would exceed the Water Quality Criteria and Guidelines found in appendix B. **B.**) The ambient concentration of a pollutant in a water body shall not exceed the Ambient Water Quality Criteria and Guidelines, (Appendix B) for the protection of aquatic organisms from acute or chronic effects, unless the criteria or guidelines are modified by the Director in accordance with the terms and conditions provided in the RI DEM Site Specific Aquatic Life Water Quality Criteria Development Policy.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Phosphorus	0.10 µg/l	See above.	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	Continuous concentration of 0.1 µg/l	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usage.	None in such concentrations that would impair any usages specifically assigned to said class, or cause undesirable or nuisance aquatic species associated with cultural eutrophication. Shall not exceed site-specific limits if deemed necessary by the director to prevent or minimize accelerated or cultural eutrophication. Total phosphorus, nitrates and ammonia may be assigned site-specific permit limits based on reasonable Best Available Technologies. Where waters have low tidal flushing rates, applicable treatment to prevent or minimize accelerated or cultural eutrophication ma be required for regulated NPS activities.	No such classification.
Nitrate - N	10,000 µg/l	See above.	Shall not exceed the site-specific limits necessary to control accelerated or cultural eutrophication.	N/A	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usage.	Nitrates and ammonia may be assigned site-specific permit limits based on reasonable Best Available Technologies.	No such classification.
Substances Potentially Toxic	N/A	See above.	All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.	No toxics in toxic amounts.	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See Table 1 of part 703.5 of the Regulation for specific standards.	Criteria for specific substances are listed in Table 1 in Appendix B of the Regulation. To protect aquatic life, the one hour average concentration of a pollutant should not exceed the acute criteria more than once every three years on the average. An exclusion to this rule are the pesticides and PCBs acute criteria, which are considered instantaneous values. The four day average concentration of a pollutant should not exceed the chronic criteria more than once every three years on the average. These aquatic life criteria shall be achieved in all waters, except mixing zones, regardless of the waters' classification.	No such classification.
Radioactivity	N/A	See above.	All surface waters shall be free from radioactive substances in concentrations or combinations that would be harmful to human, animal, or aquatic life, or the most sensitive designated use; result in radionuclides in aquatic life exceeding the recommended limits for consumption by humans; or exceed MA Drinking Water Regulations.	Discharge of pollutants may not impart radioactivity that cause those waters to be unsuitable for their designated uses.	No such classification.	N/A	The level of radioactive materials in all waters shall not be in concentrations or combinations which will likely be harmful to humans, fish, wildlife, or result in concentrations in organisms producing undesirable conditions.	No such classification.
Gross Beta	N/A	See above.	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Radium 226	N/A	See above.	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Strontium 90	N/A	See above.	N/A	N/A	No such classification.	N/A	N/A	No such classification.
Mixing Zones	Quality for life within a mixing zone should be such that the 96- hour LC50 for biota significant to the indigenous aquatic community is not exceeded; the mixing zone should be free from effluent substances that will settle to form objectionable deposits free from effluent-associated materials that float to form unsightly masses, and free from effluent-associated substances that produce objectionable color, odor, or turbidity.	See above.	Mixing zones shall be limited to an area or volume as small as feasible. Mixing zones shall not interfere with the migration or free movement of fish or other aquatic life. Mixing zones shall not create nuisance conditions, accumulate pollutants in sediments or biota in toxic amounts or otherwise diminish the existing or designated uses of the segment disproportionately.	Established on a case-by-case basis.	No such classification.	**For thermal mixing zones**: the department shall specify definable, numerical limits for all mixing zones. Conditions in the mixing zone shall not be lethal in contravention of water quality standards to aquatic biota which may enter the zone. The location of mixing zones for thermal discharges shall not interfere with spawning areas, nursery areas, and fish migration routes. **For non-thermal mixing zones**: Within mixing zones, water quality standards for pollutants are expected to be exceeded, potentially impairing habitat usability for fish and benthic communities. Detailed guidelines can be found in TOGS 1.3.1	**All mixing zones:** Meet criteria for aesthetics, in accordance with rule 8.D.(1).b. Limited to an area/ volume that will prevent interference with existing and designated uses in the waterbody segment and beyond. Allow appropriate zone of passage for fish and organisms, prohibit lethality to organisms passing through zone, and protect for spawning/nursery habitat. Not allow substances to accumulate in sediments, fish, wildlife or food chains **Thermal:** Where thermal zones are allowed by the Director, the zone will be limited to no more than 1/4 of the cross sectional area and /or volume of river flow, stream or estuary, leaving at least 3/4 free as a zone of passage. **Non-thermal:** The Director may recognize a limited acute and/or chronic mixing zone (s) on a case-by-case basis. The locations, size ad shape shall be provided for the maximum protection of fish and wildlife.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Class SD Waters								
Aesthetics	All waters free from substances attributable to wastewater or other discharges that: settle to form objectionable deposits; float as debris, scum, oil, or other matter to form nuisances; produce objectionable color, odor, taste, or turbidity; injure or are toxic or produce adverse physiological responses in humans, animals or plants; and produce undesirable or nuisance aquatic life.	See below.	No such classification.	No such classification.	No such classification.	No taste, odor, or odor-producing, toxic, or other deleterious substances in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. See section 703.5, table 1 in the Regulation for standards for specific substances.	No such classification.	No such classification.
Aquatic Life	N/A	See below.	No such classification.	No such classification.	No such classification.	See section 703.5, table 1 for standards for specific substances.	No such classification.	No such classification.
Dissolved Oxygen (DO)	**Cold Water Criteria**: 30 day mean 6.5 mg/l. **Warm Water Criteria**: 30 day mean 5.5 mg/l.	One or more water quality criteria not being consistently achieved for Class SA or SB. Conditions cannot be corrected by current technology. Class goal always SA or SB.	No such classification.	No such classification.	No such classification.	Shall not be less than 3.0 mg/l at any time.	No such classification.	No such classification.
Sludge Deposits, Solid Refuse, Floating Solids, Oil, Grease and Scum	**For aquatic life**: (1) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater or marine species, (2) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed, (3) Surface waters shall be virtually free from floating non-petroleum oils of vegetable or animal origin, as well as petroleum derived oils.	See above.	No such classification.	No such classification.	No such classification.	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease. No sludge in any amounts.	No such classification.	No such classification.
Color and Turbidity	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity. **Color**: Waters shall be virtually free from substances producing objectionable color for aesthetic purposes; the source of supply should not exceed 75 color units for domestic water supplies; increased color should not reduce the depth of the compensation point for photosynthetic activity by more than 10% from seasonally established norm for aquatic life.	See above.	No such classification.	No such classification.	No such classification.	**Color**: None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages. **Turbidity** - No increase that will cause a substantial visible contrast to natural conditions.	No such classification.	No such classification.
Taste and Odor	All waters free from substances attributable to wastewater or other discharges that produce objectionable color, odor, taste, or turbidity.	See above.	No such classification.	No such classification.	No such classification.	None in any amounts that will adversely affect the taste, color, or odor thereof, or impair the waters for their best usages.	No such classification.	No such classification.
pH	**Marine Aquatic Life**: 6.5-8.5.	See above.	No such classification.	No such classification.	No such classification.	The normal range shall not be extended by more than 0.1 pH unit.	No such classification.	No such classification.
Temperature	The maximum acceptable increase in weekly average temperature resulting from artificial sources in 1 degree C during all seasons. Daily temperature cycles characteristic of the water body segment should not be altered in either amplitude or frequency.	See above.	No such classification.	No such classification.	No such classification.	All thermal discharges to the waters of the State shall ensure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water. The natural seasonal temperature cycle shall be retained. Annual spring and fall temperature changes shall be gradual. Large day-to-day temperature fluctuations due to heat of artificial origin shall be avoided. Detailed criteria for specific types of waters are given in Part 704 of the Regulation.	No such classification.	No such classification.
Chemical Constituents	N/A	See above.	No such classification.	No such classification.	No such classification.	None in amounts that will adversely affect the taste, color, odor thereof or impair the waters for their best use. See part 703.5, table 1 for standards for specific substances.	No such classification.	No such classification.

Parameter	EPA	CT	MA	ME	NH	NY	RI	VT
Phosphorus	0.10 µg/l	See above.	No such classification.	No such classification.	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usage.	No such classification.	No such classification.
Nitrate - N	10,000 µg/l	See above.	No such classification.	No such classification.	No such classification.	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usage.	No such classification.	No such classification.
Mixing Zones	Quality for life within a mixing zone should be such that the 96- hour LC50 for biota significant to the indigenous aquatic community is not exceeded; the mixing zone should be free from effluent substances that will settle to form objectionable deposits free from effluent-associated materials that float to form unsightly masses, and free from effluent-associated substances that produce objectionable color, odor, or turbidity.	See above.	No such classification.	No such classification.	No such classification.	**For thermal mixing zones**: the department shall specify definable, numerical limits for all mixing zones. Conditions in the mixing zone shall not be lethal in contravention of water quality standards to aquatic biota which may enter the zone. The location of mixing zones for thermal discharges shall not interfere with spawning areas, nursery areas, and fish migration routes. **For non-thermal mixing zones**: Within mixing zones, water quality standards for pollutants are expected to be exceeded, potentially impairing habitat usability for fish and benthic communities. Detailed guidelines can be found in TOGS 1.3.1	No such classification.	No such classification.