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314 CMR 4.00: MASSACHUSETTS SURFACE WATER QUALITY STANDARDS

Section

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4.01: General Provisions

(1) Title. 314 CMR 4.00 shall be known as the "Massachusetts Surface Water Quality Standards".

(2) Organization of the Standards. 314 CMR 4.00 is comprised of seven sections: 314 CMR 4.01: *General Provisions*; 314 CMR 4.02: *Definitions*; 314 CMR 4.03: *Application of Standards*; 314 CMR 4.04: *Antidegradation Provisions*; 314 CMR 4.05: *Classes and Criteria*; 314 CMR 4.06: *Classification, Figures, and Tables*; and 314 CMR 4.07: *Severability*.

(3) Purpose. M.G.L. c. 21, §§ 26 through 53 charges the Department with the duty and responsibility to protect the public health and enhance the quality and value of the water resources of the Commonwealth. It directs the Department to take all action necessary or appropriate to secure to the Commonwealth the benefits of the federal Clean Water Act, 33 U.S.C. § 1251 *et seq*. The objective of 33 U.S.C. § 1251 *et seq*. is the restoration and maintenance of "the chemical, physical and biological integrity of the Nation's waters" 33 U.S.C. § 1251(a). To achieve the foregoing requirements the Department has adopted the Massachusetts Surface Water Quality Standards which designate the most sensitive uses for which the various waters of the Commonwealth shall be enhanced, maintained and protected; which prescribe the minimum water quality criteria required to sustain the Designated Uses, as defined in 314 CMR 4.02: *Designated Uses*; and which contain regulations necessary to achieve the Designated Uses and maintain existing water quality including, where appropriate, the prohibition of discharges.

4.02: Definitions

Aquatic Life. A native, naturally diverse, community of aquatic flora and fauna including, but not limited to, wildlife and threatened and endangered species.

Authorization. An approval granted pursuant to 314 CMR 4.04(5) for a discharge to High Quality Waters, Outstanding Resource Waters or Special Resource Waters.

Background Conditions. That water quality which exists or would exist in the absence of pollutants requiring permits and other controllable cultural factors that are subject to regulation under M.G.L. c. 21, §§ 26 through 53.

Best Available Treatment Technology. The technology-based standard of the Clean Water Act defined as Best Available Technology Economically Achievable (BAT) for privately-owned treatment works. BAT effluent limitation guidelines reflect the best performance technologies for a particular pollutant or group of pollutants, or for a category or class of point sources, that are economically achievable.

Best Management Practices or BMPs. Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the Commonwealth. BMPs include treatment requirements, operating procedures, structures, devices, and/or practices to control plant site runoff, spillage, or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgment. The method used by the Department to develop technology-based Surface Water Discharge Permit Conditions on a case by case basis using all reasonably available and relevant data.

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Biological Integrity. The capability of supporting and maintaining a balanced, integrated, adaptive community of organisms having species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

Class A Waters or Class A. Those Inland Waters so designated pursuant to 314 CMR 4.06; including, without limitation, 314 CMR 4.06(1)(d)1. and (4) as public water supplies and their tributaries; certain wetlands designated in 314 CMR 4.06(2); certain reservoirs designated in 314 CMR 4.06(3); and certain surface waters designated in 314 CMR 4.06(6)(b). They are designated as excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation, even if not allowed. These waters shall have excellent aesthetic value. These waters are protected as Outstanding Resource Waters.

Class B Waters or Class B. Those Inland Waters so designated pursuant to 314 CMR 4.06; including, without limitation, certain wetlands designated in 314 CMR 4.06(2), certain other waters designated in 314 CMR 4.06(5), and certain qualified waters designated in 314 CMR 4.06(6)(b). These waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06(1)(d)7. and (6)(b) as a "Treated Water Supply" these waters shall be suitable as a source of public water supply with appropriate treatment. Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.

Class B (CSO). Those Class B partial use Inland Waters so designated in accordance with 314 CMR 4.06(1)(d)11. and (6)(b).

Class SA Waters or Class SA. Those Coastal and Marine Waters so designated pursuant to 314 CMR 4.06; including, without limitation, 314 CMR 4.06(2) and (5), and certain qualified waters designated in 314 CMR 4.06(6)(b). These waters are designated as an excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, excellent habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated for shellfishing in 314 CMR 4.06(6)(b), these waters shall be suitable for shellfish harvesting without depuration (Approved and Conditionally Approved Shellfish Areas). These waters shall have excellent aesthetic value.

Class SB Waters or Class SB. Those Coastal and Marine Waters so designated pursuant to 314 CMR 4.06; including, without limitation, 314 CMR 4.06(2) and certain surface waters designated in 314 CMR 4.06(6)(b). These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated for shellfishing in 314 CMR 4.06(6)(b), these waters shall be suitable for shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas). These waters shall have consistently good aesthetic value.

Class SB (CSO). Those Class SB partial use Coastal and Marine Waters so designated in accordance with 314 CMR 4.06(1)(d)11. and (6)(b).

Coastal and Marine Waters. The Atlantic Ocean and all contiguous saline bays, inlets and harbors within the jurisdiction of the Commonwealth including areas where fresh and salt waters mix and tidal effects are evident or any partially enclosed coastal body of water where the tide meets the current of a stream or river.

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Cold Water Fishery. Waters in which the mean of the maximum daily temperature over a seven day period generally does not exceed 68°F (20°C) and, when other ecological factors are favorable (such as habitat), are capable of supporting a year-round population of cold water stenothermal aquatic life such as trout (Salmonidae).

Combined Sewer Overflow or CSO. Any intermittent overflow, bypass or other discharge from a municipal combined sewer system which results from a wet-weather flow in excess of the dry-weather carrying capacity of the system.

Criteria. Elements of state water quality standards, expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a use.

Cultural Eutrophication. The human-induced increase in nutrients resulting in acceleration of primary productivity, which causes nuisance conditions, such as algal blooms or dense and extensive macrophyte growth, in a waterbody.

Department or MassDEP. The Massachusetts Department of Environmental Protection.

Designated Use. Those uses specified in 314 CMR 4.05 and 314 CMR 4.06 for each water Class whether or not they are being attained.

Discharge of Pollutants. Any addition of any pollutant or combination of pollutants to the waters of the Commonwealth from any source.

EPA. The United States Environmental Protection Agency.

Epilimnion. The upper circulating layer of a stratified lake or pond.

Existing Use. Those designated uses and any other uses that do not impair the designated uses that are actually attained in a waterbody on or after November 28, 1975; except that in no case shall assimilation or transport of pollutants be considered an existing use.

Federal Act. *The Federal Water Pollution Control Act* (FWPCA), currently known as the *Clean Water Act*, 33 U.S.C. § 1251 *et seq*.

Harmonic Mean Flow. A long-term flow value calculated by dividing the number of daily flows analyzed by the sum of the reciprocals of those daily flows.

Highest and Best Practical Treatment or HBPT. The best practicable waste treatment technology for publicly-owned treatment works that is the most appropriate means available on a regional basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. HBPT effluent limitation guidelines reflect the best performance technologies for a particular pollutant or group of pollutants that are economically achievable.

Inland Waters or Fresh Waters. Any surface water not subject to tidal action or not subject to the mixing of fresh and ocean waters.

Lakes and Ponds. Waterbodies having open water, situated in a topographical depression, generally with a maximum depth of greater than two meters. Lakes and ponds do not include constructed stormwater retention basins, constructed impervious basins or impervious impoundments, permitted wastewater lagoons, constructed farm ponds into which and from which no stream or river flows, and generally do not include dammed river or stream impoundments. The Department may determine, on a case-by-case basis, that a shallower waterbody or a dammed river or stream impoundment is a lake or pond based on aquatic and other resources or uses to be protected.

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Massachusetts Act. The *Massachusetts Clean Waters Act*, M.G.L. c. 21, §§ 26 through 53.

National Goal Uses. Propagation of fish, shellfish other aquatic life and wildlife and recreation in and on the water in accordance with 33 U.S.C. § 1251 *et seq*.

New or Increased Discharge. Any discharge which commences after the date 314 CMR 4.00 initially became effective; any discharge requiring a permit which is unpermitted and commenced prior to the date 314 CMR 4.00 became effective; and any increase in discharges except for an increase in conformance with a currently valid permit.

Nonpoint Source. Any source of pollutant discharge that is not a point source.

Outstanding Resource Waters or ORW. Waters designated for protection in 314 CMR 4.06, which include Class A Public Water Supplies (314 CMR 4.06(1)(d)1.) and their tributaries, certain wetlands as specified in 314 CMR 4.06(2), certain surface waters designated in 314 CMR 4.06(6)(b), and other waters as determined by the Department based on their outstanding socio-economic, recreational, ecological and/or aesthetic values.

Point Source. Any discernable, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, from which pollutants are or may be discharged. Point Source does not include return flows from irrigated agriculture.

Pollutant. Any element or property of sewage, agricultural, industrial or commercial waste, runoff, leachate, heated effluent, or other matter in whatever form, and whether originating at a point or nonpoint source, that is or may be discharged, drained or otherwise introduced into any sewage system, treatment works or waters of the Commonwealth.

Primary Contact Recreation. Any recreation or other water use in which there is prolonged and intimate contact with the water with a significant risk of ingestion of water. These include, but are not limited to, wading, swimming, diving, surfing and water skiing.

Publicly-owned Treatment Works or POTW shall have the meaning as defined in 314 CMR 3.02: Publicly-owned Treatment Works or POTW.

Rivers and Streams. Waterbodies contained within a channel (naturally or artificially created) which periodically or continuously contains flowing water or forms a connecting link between two bodies of standing water.

Secondary Contact Recreation. Any recreation or other water use in which contact with the water is either incidental or accidental. These include, but are not limited to, fishing, including human consumption of fish, boating and limited contact incident to shoreline activities. Where designated, secondary contact recreation also includes shellfishing, including human consumption of shellfish.

Segment. A finite portion of a waterbody established by the Department for the purpose of classification.

Site-specific Criteria. Site-specific criteria are criteria that apply to a particular surface water or segment, as set forth in 314 CMR 4.06(6)(c): *Table 28*: *Site-specific Criteria*.

Source Reduction. In-plant changes in production processes or raw materials that reduce, avoid or eliminate the use of pollutants including, but not limited to, toxic or hazardous substances, or generation of pollution by-product per unit of product, so as to reduce risks overall to the environment. Also compliance with M.G.L. c. 21I: *Toxics Use Reduction Act*, to the extent required by such law.

Special Resource Waters or SRW. Waters of exceptional significance, such as waters in national or State parks and wildlife refuges, so designated by the Department pursuant to 314 CMR 4.06(1)(d)4. and (6)(b).

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Surface Waters. All waters other than groundwaters within the jurisdiction of the Commonwealth including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and vernal pools.

Total Maximum Daily Load or TMDL. The sum of a receiving water's individual waste load allocations and load allocations and natural background, which, together with a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality, represents the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards in all seasons.

Toxic Pollutants. Any pollutant or combination of pollutants, including disease causing agents, that are capable of producing an adverse effect in an organism or its offspring, including food chain effects, according to information available to the Department. The effect may be the result of direct or indirect exposure and may injure structure, function or cause death to the organism. These pollutants include, but are not limited to, those identified in 314 CMR 3.17: *Appendix B - Toxic Pollutants*.

Treatment Works shall have the meaning as defined in 314 CMR 3.02: Treatment Works.

Use Attainability Analysis or UAA. A structured scientific assessment of the factors affecting the attainment of a use, which may include physical, chemical, biological, and economic factors as described in 40 CFR 131.10(g).

Variance. A temporary modification of the surface water quality standards issued pursuant to 314 CMR 4.03(4).

Vernal Pool. A waterbody that has been certified by the Massachusetts Division of Fisheries and Wildlife as a vernal pool. Vernal pools are confined basin depressions which, at least in most years, hold water for a minimum of two continuous months during the spring and/or summer, and which are free of adult fish populations.

Warm Water Fishery. Waters in which the maximum mean monthly temperature generally exceeds 68°F (20°C) during the summer months and are not capable of sustaining a year-round population of cold water stenothermal aquatic life.

Waters of the Commonwealth. All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, groundwaters, and vernal pools.

4.03: Application of Standards

(1) (a) Establishment of Effluent Limitations. The Department will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained or attained. The level of treatment for an individual discharger will be established by the discharge permit in accordance with 314 CMR 3.00: *Surface Water Discharge Permit Program*. In establishing water quality based effluent limitations the Department shall take into consideration natural background conditions and existing discharges. Discharges shall be limited or prohibited to protect existing uses and not interfere with the attainment of designated uses in downstream and adjacent segments. The Department will provide a reasonable margin of safety to account for any lack of knowledge concerning the relationship between the pollutants being discharged and their impact on water quality. Where the Department has not established water quality based effluent limitations in a permit and a violation of water quality standards attributable to a discharge occurs, the Department may modify, suspend or revoke the permit, in whole or in part, for cause in accordance with 314 CMR 3.00.

(b) Compliance Schedules. A permit may, when appropriate, specify a schedule leading to compliance with the Massachusetts and Federal Clean Water Acts and regulations. The purpose of a schedule of compliance generally is to afford a permittee adequate time to comply with one or more permit requirements or limitations that are based on new, newly interpreted or revised water quality standards that became effective after both issuance of the

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initial permit for a discharge and July 1, 1977. The Department may include a schedule of compliance in a permit at the time of permit reissuance or modification where the permittee either cannot comply with such permit requirements or limitations, or there is insufficient information available to determine whether the permittee can comply with such permit requirements or limitations. A schedule of compliance shall require compliance at the earliest practicable time, as determined by the Department. A schedule of compliance shall include dates for specified tasks or activities leading to compliance and may include interim effluent limitations, as the Department deems appropriate.

(c) TMDLs. The Department may develop and enforce compliance with TMDLs and TMDL implementation plans for waters or segments impaired by a pollutant or pollutants.

(2) Mixing Zones. In applying 314 CMR 4.00, the Department may recognize a limited area or volume of a waterbody as a mixing zone for the initial dilution of a discharge. Waters within a mixing zone may fail to meet specific water quality criteria, provided the following conditions are met:

(a) Mixing zones shall be limited to an area or volume as small as feasible. There shall be no lethality to organisms passing through the mixing zone as determined by the Department. The location, design and operation of the discharge shall minimize impacts on aquatic life and other existing and designated uses within and beyond the mixing zone.

(b) Mixing zones shall not interfere with the migration or free movement of fish or other aquatic life. There shall be safe and adequate passage for swimming and drifting organisms with no deleterious effects on their populations.

(c) Mixing zones shall not create nuisance conditions, accumulate pollutants in sediments or biota in toxic amounts or otherwise interfere with the existing or designated uses of surface waters.

(3) Hydrologic Conditions. The Department will determine the most severe hydrologic condition at which water quality criteria must be applied. The Department may further stipulate the magnitude, duration and frequency of allowable excursions from the magnitude component of criteria and may determine that criteria should be applied at flows lower than those specified in order to prevent adverse impacts of discharges on existing and designated uses.

(a) For rivers and streams, the lowest flow condition at and above which aquatic life criteria must be applied is the lowest mean flow for seven consecutive days to be expected once in ten years. When records are not sufficient to determine this condition, the flow may be estimated using methods approved by the Department.

(b) In waters where flows are regulated by dams or similar structures, the lowest flow condition at which aquatic life criteria must be applied is the flow equaled or exceeded 99% of the time on a yearly basis, or another equivalent flow agreed upon by the Department and the federal, state or private entity controlling the flow. The minimum flow established in such an agreement will become the critical low flow for those waters covered by the agreement. When the Department issues a 401 Water Quality Certification of an activity subject to licensing by the Federal Energy Regulatory Commission, flows shall be maintained or restored to protect existing and designated uses.

(c) In coastal and marine waters and for lakes and ponds, the Department will establish extreme hydrologic conditions at which aquatic life criteria must be applied on a case-by-case basis. In all cases existing uses shall be protected and the selection shall not interfere with the attainment of designated uses.

(d) For rivers and streams and waters whose flows are regulated by dams or similar structures, human health based criteria may be applied at the harmonic mean flow. For coastal and marine waters and lakes and ponds, human health based criteria may be applied at conditions the Department determines will result in protection at least equivalent to that provided for rivers and streams.

(4) National Goal Uses, Partial Uses, and Variances.

(a) The Department may remove a national goal use that is not an existing use, designate a segment as partial use, or grant a variance to authorize a discharge, provided the applicant demonstrates that:

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1. Naturally occurring pollutant concentrations prevent the attainment of the use;
2. Natural, ephemeral, intermittent or low-flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating state water conservation requirements to enable uses to be met;
3. Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;
4. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use;
5. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
6. Controls more stringent than those required by sections 301(b) and 306 of the Federal Act would result in substantial and widespread economic and social impact, this demonstration may include documentation of median household income or other economic measures adjusted to reflect the cost of living or other circumstances particular to the affected area.

(b) Prior to removal of a use or the designation of a partial use, the Department shall provide public notice and the opportunity for a public hearing in accordance with M.G.L. c. 30A and the applicant shall submit to the Department the information necessary for completion of a Use Attainability Analysis.

(c) The Department may grant a variance for a specified period of time for a particular discharger and for specific pollutants so that it can be determined through a Use Attainability Analysis whether uses can be attained. A variance applicant shall submit to the Department a detailed assessment of the types of information that will be needed for completion of the Use Attainability Analysis. A variance may be granted only for the pollutants causing noncompliance with criteria and all other provisions of 314 CMR 4.00 apply for the term of the variance. Prior to granting a variance, the Department will provide or require public notice and provide an opportunity for a public hearing in accordance with 314 CMR 2.00: *Permit Procedures*. An applicant granted a variance shall submit to the Department information necessary for completion of a Use Attainability Analysis in accordance with the provisions of the variance and the permit.

(5) Natural Background Conditions. Excursions from criteria due to solely natural conditions shall not be interpreted as violations of standards and shall not affect the water use classifications adopted by the Department.

(6) Procedures for Sampling and Analyses. All procedures used for the purpose of collecting, preserving and analyzing samples in connection with 314 CMR 4.00 shall be approved by the Department.

(a) Approved procedures currently include the following:
1. E.W. Rice, R.B. Baird, A.D. Eaton, editors; *Standard Methods for the Examination of Water and Wastewater*, 23rd Edition; published by the American Public Health Association, *et al*., 2017;
2. Clean Water Act Analytical Methods approved by EPA and described at 40 C.F.R. Part 136, as amended by 82 *Federal Register* 40846, August 28, 2017;
3. *Annual Book of ASTM Standards*. Section 11, vol. 11.01-11.08; published by West Conshohocken: ASTM International, 2018;
4. Parsons, T.R., Maita, Y., and Lalli, C.M., *A Manual of Chemical and Biological Methods for Seawater Analysis*; published by New York: Pergamon Press, 1984; and
5. *EPA, Methods for the Determination of Chemical Substances in Marine and Estuarine Environmental Matrices* - 2nd Edition; EPA/600/R-97/072; published by Washington, DC: U.S. Environmental Protection Agency, 1997.

(b) MassDEP may approve the use of additional or alternative procedures. Any additional or alternative procedures not listed in 314 CMR 4.03(6)(a)1. through 5. must meet one or more of the following evaluation criteria for approval:
1. A procedure that is authored or approved by a nationally-recognized, competent and authoritative source, such as the EPA, U.S. Geological Survey, American Society for Testing and Materials, and the American Public Health Association.

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2. A new or modified procedure that has been approved through the EPA Alternative Test Procedure (ATP) Program, or is shown to be compliant with the Clean Water Act ATP program as described at 40 CFR 136.4 and 136.5.

3. A new or modified procedure that provides a preferred alternative to a promulgated method due to greater sensitivity, improved technological rigor, enhanced performance, and/or greater applicability, and is included as part of an approved Quality Assurance Project Plan.

(7) 401 Water Quality Certifications. The Department may apply the standards, and any other appropriate requirement of state law including, without limitation, regulations promulgated by other state water resource agencies, such as the Massachusetts Division of Fisheries and Wildlife and the Massachusetts Office of Coastal Zone Management, under their respective statutory authorities, to any activity which may result in a discharge subject to certification under section 401 of the Federal Act, unless the Department exercises its discretion to waive certification.

4.04: Antidegradation Provisions

(1) Protection of Existing Uses. In all cases existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

(2) Protection of High Quality Waters. High Quality waters are waters whose quality exceeds minimum levels necessary to support the national goal uses, low-flow waters, and other waters whose character cannot be adequately described or protected by traditional criteria. These waters shall be protected and maintained for their existing level of quality, unless limited degradation by a new or increased discharge is authorized by the Department pursuant to 314 CMR 4.04(5). Limited degradation also may be allowed by the Department where it determines that a new or increased discharge is insignificant because it does not have the potential to impair any existing or designated water use and does not have the potential to cause any significant lowering of water quality.

(3) Protection of Outstanding Resource Waters. The quality of Outstanding Resource Waters shall be protected and maintained.

(a) Any person having an existing discharge to these waters shall cease said discharge and connect to a POTW, unless it is shown by said person that such a connection is not reasonably available or feasible. Existing discharges not connected to a POTW shall be provided with the highest and best practical method of waste treatment determined by the Department as necessary to protect and maintain the outstanding resource water.

(b) A new or increased discharge to an Outstanding Resource Water is prohibited unless:

1. the discharge is determined by the Department to be for the express purpose and intent of maintaining or enhancing the resource for its designated use and an authorization is granted as provided in 314 CMR 4.04(5). The Department's determination to allow a new or increased discharge shall be made in agreement with the federal, state, local or private entity recognized by the Department as having direct control of the water resource or governing water use; or

2. the discharge is dredged or fill material for qualifying activities in limited circumstances, after an alternatives analysis which considers the Outstanding Resource Water designation and further minimization of any adverse impacts. Specifically, a discharge of dredged or fill material is allowed only to the limited extent specified in 314 CMR 9.00: *401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States within the Commonwealth* and 314 CMR 4.06(1)(d). The Department retains the authority to deny discharges which meet the criteria of 314 CMR 9.00, but will result in substantial adverse impacts to the physical, chemical, or biological integrity of surface waters of the Commonwealth.

(4) Protection of Special Resource Waters. The quality of Special Resource Waters shall be protected and maintained. No new or increased discharge to an SRW, and no new or increased discharge to a tributary to an SRW that would result in lower water quality in the SRW, may be allowed, except where:

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(a) the discharge results in temporary and short term changes in the quality of the SRW, provided that the discharge does not permanently lower water quality or result in water quality lower than necessary to protect uses; and
(b) an authorization is granted pursuant to 314 CMR 4.04(5).

(5) Authorizations.
(a) An authorization to discharge to waters designated for protection under 314 CMR 4.04(2) may be issued by the Department where the applicant demonstrates that:
1. The discharge is necessary to accommodate important economic or social development in the area in which the waters are located;
2. No less environmentally damaging alternative site for the activity, receptor for the disposal, or method of elimination of the discharge is reasonably available or feasible;
3. To the maximum extent feasible, the discharge and activity are designed and conducted to minimize adverse impacts on water quality, including implementation of source reduction practices; and
4. The discharge will not impair existing water uses and will not result in a level of water quality less than that specified for the Class.
(b) An authorization to discharge to the narrow extent allowed in 314 CMR 4.04(3) or 314 CMR 4.04(4) may be granted by the Department where the applicant demonstrates compliance with 314 CMR 4.04(5)(a)2. through 4.
(c) Where an authorization is at issue, the Department shall circulate a public notice in accordance with 314 CMR 2.06: *Public Notice and Comment*. Said notice shall state an authorization is under consideration by the Department, and indicate the Department's tentative determination. The applicant shall have the burden of justifying the authorization. Any authorization granted pursuant to 314 CMR 4.04 shall not extend beyond the expiration date of the permit.
(d) A discharge exempted from the permit requirement by 314 CMR 3.05(4) (discharge necessary to abate an imminent hazard) may be exempted from 314 CMR 4.04(5) by decision of the Department.
(e) A new or increased discharge specifically required as part of an enforcement order issued by the Department in order to improve existing water quality or prevent existing water quality from deteriorating may be exempted from 314 CMR 4.04(5) by decision of the Department.

(6) The Department applies its Antidegradation Implementation Procedures to point source discharges subject to 314 CMR 4.00.

(7) Discharge Criteria. In addition to the other provisions of 314 CMR 4.00, any authorized discharge shall be provided with a level of treatment equal to or exceeding the requirements of 314 CMR 3.00: *Surface Water Discharge Permit Program*. Before authorizing a discharge, all appropriate public participation and intergovernmental coordination shall be conducted in accordance with 314 CMR 2.00: *Permit Procedures*.

4.05: Classes and Criteria

(1) Classes and Uses. The surface waters of the Commonwealth shall be segmented and each segment assigned to one of the Classes listed in 314 CMR 4.05(3) and (4). Each class is identified by the most sensitive, and therefore governing, water uses to be achieved and protected. Surface waters may be suitable for other beneficial uses, but shall be regulated by the Department to protect and enhance the existing and designated uses. In accordance with 314 CMR 4.03(4), the Department may designate a partial use subcategory for these Classes. A partial use designation may be appropriate where waters are impacted by combined sewer overflows or stormwater discharges. Partial use is described in 314 CMR 4.06(1)(d)11.

(2) Criteria.
(a) Minimum criteria for each class of surface water are listed in 314 CMR 4.05(3) and (4). Additional minimum criteria for all surface waters are listed in 314 CMR 4.05(5). In cases where fresh water and coastal and marine waters mix, 314 CMR 4.05(6) establishes whether fresh water or coastal and marine water aquatic life criteria apply. Provided that all existing and designated uses are protected, the Department may establish site-specific criteria as

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alternative minimum criteria. Site-specific numerical criteria also may supplement any of the narrative criteria in 314 CMR 4.00. Site-specific criteria are set forth in and pursuant to 314 CMR 4.05(7). Should the Department develop site-specific numerical criteria for any pollutant that is the primary cause of nonattainment of any criteria in 314 CMR 4.00, the Department may determine that such site-specific criteria supersede other criteria in 314 CMR 4.00. The Department may establish site-specific criteria for a segment or segments of a water, for an entire water, or for a group of waters with similar physical, chemical or biological qualities. The Department may establish site-specific hydrologic conditions at which criteria are applied. The Department will adopt any such site-specific criteria as revisions to 314 CMR 4.00 in accordance with M.G.L. c. 30A.

(b) Criteria for segments designated for partial use in 314 CMR 4.06 shall be site-specific but, to the maximum extent feasible, shall be the same as the criteria assigned to the Class. For segments so designated because of the impacts of CSO or stormwater discharges, criteria may depart from the criteria assigned to the Class only to the extent necessary to accommodate the technology-based treatment limitations of the CSO or stormwater discharges.

(3) Inland Water Classes.

(a) Class A. Those Inland Waters so designated pursuant to 314 CMR 4.06; including, without limitation, 314 CMR 4.06(1)(d)1. and (4) as public water supplies and their tributaries; certain wetlands designated in 314 CMR 4.06(2); certain reservoirs designated in 314 CMR 4.06(3); and certain surface waters designated in 314 CMR 4.06(6)(b). They are designated as excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation, even if not allowed. These waters shall have excellent aesthetic value. These waters are protected as Outstanding Resource Waters.

1. Dissolved Oxygen. Shall not be less than 6.0 mg/L in cold water fisheries and not less than 5.0 mg/L in warm water fisheries. Where natural background conditions are lower, DO shall not be less than natural background conditions. Natural seasonal and daily variations that are necessary to protect existing and designated uses shall be maintained.

2. Temperature.

a. Shall not exceed 68°F (20°C) based on the mean of the daily maximum temperature over a seven-day period in cold water fisheries, unless naturally occurring. Where a reproducing cold water aquatic community exists at a naturally occurring higher temperature, the temperature necessary to protect the community shall not be exceeded and natural daily and seasonal temperature fluctuations necessary to protect the community shall be maintained. Temperature shall not exceed 83°F (28.3°C) in warm water fisheries. The rise in temperature due to a discharge shall not exceed 1.5°F (0.8°C); and

b. natural seasonal and daily variations that are necessary to protect existing and designated uses shall be maintained. There shall be no changes from natural background conditions that would impair any use assigned to this Class, including those conditions necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms.

3. pH. Shall be in the range of 6.5 through 8.3 standard units, but not more than 0.5 units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class.

4. Bacteria.

a. At water supply intakes in unfiltered public water supplies: either fecal coliform shall not exceed 20 fecal coliform organisms per 100 mL in all samples taken in any six-month period, or total coliform shall not exceed 100 organisms per 100 mL in 90% of the samples taken in any six-month period. If both fecal coliform and total coliform are measured, then only the fecal coliform criterion must be met. More stringent regulations may apply under 310 CMR 22.00: *Drinking Water* (*see* 314 CMR 4.06(1)(d)1.); and

b. For protection of primary and secondary contact recreation, surface waters shall meet the additional minimum criteria for bacteria set forth in 314 CMR 4.05(5)(f)1., 3., and 4.

4.05: continued

5. Solids. These waters shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to this class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom.

6. Color and Turbidity. These waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class.

7. Oil and Grease. These waters shall be free from oil and grease, petrochemicals and other volatile or synthetic organic pollutants.

8. Taste and Odor. None other than of natural origin.

(b) Class B. Those Inland Waters so designated pursuant to 314 CMR 4.06; including, without limitation, certain wetlands designated in 314 CMR 4.06(2); certain other waters designated in 314 CMR 4.06(5); and certain qualified waters designated in 314 CMR 4.06(6)(b). These waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06(1)(d)7. and (6)(b) as a "Treated Water Supply", they shall be suitable as a source of public water supply with appropriate treatment. Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value.

1. Dissolved Oxygen. Shall not be less than 6.0 mg/L in cold water fisheries and not less than 5.0 mg/L in warm water fisheries. Where natural background conditions are lower, DO shall not be less than natural background conditions. Natural seasonal and daily variations that are necessary to protect existing and designated uses shall be maintained.

2. Temperature.

a. Shall not exceed 68°F (20°C) based on the mean of the daily maximum temperature over a seven-day period in cold water fisheries, unless naturally occurring. Where a reproducing cold water aquatic community exists at a naturally occurring higher temperature, the temperature necessary to protect the community shall not be exceeded and the natural daily and seasonal temperature fluctuations necessary to protect the community shall be maintained. Temperature shall not exceed 83°F (28.3°C) in warm water fisheries. The rise in temperature due to a discharge shall not exceed 3°F (1.7°C) in rivers and streams designated as cold water fisheries nor 5°F (2.8°C) in rivers and streams designated as warm water fisheries (based on the minimum expected flow for the month); in lakes and ponds the rise shall not exceed 3°F (1.7°C) in the epilimnion (based on the monthly average of maximum daily temperature);

b. natural seasonal and daily variations that are necessary to protect existing and designated uses shall be maintained. There shall be no changes from natural background conditions that would impair any use assigned to this Class, including those conditions necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms;

c. alternative effluent limitations established in connection with a variance for a thermal discharge issued under 33 U.S.C. § 1251 (FWPCA, § 316(a)) and 314 CMR 3.00: *Surface Water Discharge Permit Program* are in compliance with 314 CMR 4.00. As required by 33 U.S.C. § 1251 (FWPCA, § 316(a)) and 314 CMR 3.00, for permit and variance renewal, the applicant must demonstrate that alternative effluent limitations continue to comply with the variance standard for thermal discharges; and

d. in the case of a cooling water intake structure regulated by EPA under 33 U.S.C. § 1251 (FWPCA § 316(b)), the Department has the authority under 33 U.S.C. § 1251 (FWPCA § 401), M.G.L. c. 21, §§ 26 through 53 and 314 CMR 3.00: *Surface Water Discharge Permit Program* to condition the cooling water intake structure to assure compliance of the withdrawal activity with 314 CMR 4.00 including, but not limited to, compliance with narrative and numerical criteria and protection of existing and designated uses.

3. pH. Shall be in the range of 6.5 through 8.3 standard units and not more than 0.5 units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class.

4.05: continued

4. Bacteria. For protection of primary and secondary contact recreation, surface waters shall meet the minimum criteria for bacteria set forth in 314 CMR 4.05(5)(f)1., 3., and 4.

5. Solids. These waters shall be free from floating, suspended and settleable solids in concentrations and combinations that would impair any use assigned to this Class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom.

6. Color and Turbidity. These waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this Class.

7. Oil and Grease. These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.

8. Taste and Odor. 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.

(4) Coastal and Marine Classes.

(a) Class SA. Those Coastal and Marine Waters so designated pursuant to 314 CMR 4.06; including, without limitation, 314 CMR 4.06(2) and (5), and certain qualified waters designated in 314 CMR 4.06(6)(b). These waters are designated as an excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, excellent habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated for shellfishing in 314 CMR 4.06(6)(b), these waters shall be suitable for shellfish harvesting without depuration (Approved and Conditionally Approved Shellfish Areas). These waters shall have excellent aesthetic value. In the case of a water intake structure at a desalination facility, the Department has the authority under 33 U.S.C. § 1251 (FWPCA § 401), M.G.L. c. 21, §§ 26 through 53 and 314 CMR 3.00: *Surface Water Discharge Permit Program* to condition the water intake structure to assure compliance of the withdrawal activity with 314 CMR 4.00 including, but not limited to, compliance with the narrative and numerical criteria and protection of existing and designated uses.

1. Dissolved Oxygen. Shall not be less than 6.0 mg/L. Where natural background conditions are lower, DO shall not be less than natural background. Natural seasonal and daily variations that are necessary to protect existing and designated uses shall be maintained.

2. Temperature.

a. Shall not exceed 85°F (29.4°C) nor a maximum daily mean of 80°F (26.7°C), and the rise in temperature due to a discharge shall not exceed 1.5°F (0.8°C);

b. there shall be no change from natural background that would impair any uses assigned to this class, including those conditions necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms;

c. alternative effluent limitations established in connection with a variance for a thermal discharge issued under 33 U.S.C. § 1251 (FWPCA, § 316(a)) and 314 CMR 3.00: *Surface Water Discharge Permit Program* are in compliance with 314 CMR 4.00. As required by 33 U.S.C. § 1251 (FWPCA, § 316(a)) and 314 CMR 3.00, for permit and variance renewal, the applicant must demonstrate that alternative effluent limitations continue to comply with the variance standard for thermal discharges; and

d. in the case of a cooling water intake structure regulated by EPA under 33 U.S.C. § 1251 (FWPCA § 316(b)), the Department has the authority under 33 U.S.C. § 1251 (FWPCA § 401), M.G.L. c. 21, §§ 26 through 53 and 314 CMR 3.00: *Surface Water Discharge Permit Program* to condition the cooling water intake structure to assure compliance of the withdrawal activity with 314 CMR 4.00 including, but not limited to, compliance with narrative and numerical criteria and protection of existing and designated uses.

4.05: continued

3. pH. Shall be in the range of 6.5 through 8.5 standard units and not more than 0.2 standard units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class.

4. Bacteria.

a. Waters designated for shellfishing: fecal coliform shall not exceed a geometric mean Most Probable Number (MPN) of 14 organisms per 100 mL, nor shall more than 10% of the samples exceed an MPN of 28 per 100 mL, or other values of equivalent protection based on sampling and analytical methods used by the Massachusetts Division of Marine Fisheries and approved by the National Shellfish Sanitation Program in the latest revision of the Guide for the Control of Molluscan Shellfish (more stringent regulations may apply, *see* 314 CMR 4.06(1)(d)6.); and

b. For protection of primary and secondary contact recreation, surface waters shall meet the additional minimum criteria for bacteria set forth in 314 CMR 4.05(5)(f)2. through 4.

5. Solids. These waters shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to this class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom.

6. Color and Turbidity. These waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class.

7. Oil and Grease. These waters shall be free from oil and grease and petrochemicals.

8. Taste and Odor. None other than of natural origin.

(b) Class SB. Those Coastal and Marine Waters so designated pursuant to 314 CMR 4.06; including, without limitation, 314 CMR 4.06(2) and certain surface waters designated in 314 CMR 4.06(6)(b). These waters are designated as a habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. In certain waters, habitat for fish, other aquatic life and wildlife may include, but is not limited to, seagrass. Where designated for shellfishing in 314 CMR 4.06(6)(b), these waters shall be suitable for shellfish harvesting with depuration (Restricted and Conditionally Restricted Shellfish Areas). These waters shall have consistently good aesthetic value. In the case of a water intake structure at a desalination facility, the Department has the authority under 33 U.S.C. § 1251 (FWPCA § 401), M.G.L. c. 21, §§ 26 through 53 and 314 CMR 3.00: *Surface Water Discharge Permit Program* to condition the water intake structure to assure compliance of the withdrawal activity with 314 CMR 4.00 including, but not limited to, compliance with the narrative and numerical criteria and protection of existing and designated uses.

1. Dissolved Oxygen. Shall not be less than 5.0 mg/L. Where natural background conditions are lower, DO shall not be less than natural background. Natural seasonal and daily variations that are necessary to protect existing and designated uses shall be maintained.

2. Temperature.

a. Shall not exceed 85°F (29.4°C) nor a maximum daily mean of 80°F (26.7°C), and the rise in temperature due to a discharge shall not exceed 1.5°F (0.8°C) during the summer months (July through September) nor 4°F (2.2°C) during the winter months (October through June);

b. there shall be no changes from natural background that would impair any uses assigned to this class, including those conditions necessary to protect normal species diversity, successful migration, reproductive functions or growth of aquatic organisms;

c. alternative effluent limitations established in connection with a variance for a thermal discharge issued under 33 U.S.C. § 1251 (FWPCA, § 316(a)) and 314 CMR 3.00: *Surface Water Discharge Permit Program* are in compliance with 314 CMR 4.00. As required by 33 U.S.C. § 1251 (FWPCA, § 316(a)) and 314 CMR 3.00, for permit and variance renewal, the applicant must demonstrate that alternative effluent limitations continue to comply with the variance standard for thermal discharges; and

d. in the case of a cooling water intake structure regulated by EPA under 33 U.S.C. § 1251 (FWPCA § 316(b)), the Department has the authority under 33 U.S.C. § 1251 (FWPCA § 401), M.G.L. c. 21, §§ 26 through 53 and 314 CMR 3.00: *Surface Water Discharge Permit Program* to condition the cooling water intake structure to assure compliance of the withdrawal activity with 314 CMR 4.00 including, but not limited to, compliance with narrative and numerical criteria and protection of existing and designated uses.

4.05: continued

3. pH. Shall be in the range of 6.5 through 8.5 standard units and not more than 0.2 units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this Class.

4. Bacteria.

a. Waters designated for shellfishing shall not exceed a fecal coliform median or geometric mean MPN of 88 organisms per 100 mL, nor shall more than 10% of the samples exceed an MPN of 260 per 100 mL or other values of equivalent protection based on sampling and analytical methods used by the Massachusetts Division of Marine Fisheries and approved by the National Shellfish Sanitation Program in the latest revision of the Guide For The Control of Molluscan Shellfish (more stringent regulations may apply, *see* 314 CMR 4.06(1)(d)6.); and

b. For protection of primary and secondary contact recreation, surface waters shall meet the additional minimum criteria for bacteria set forth in 314 CMR 4.05(5)(f)2 through 4.

5. Solids. These waters shall be free from floating, suspended and settleable solids in concentrations or combinations that would impair any use assigned to this class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom.

6. Color and Turbidity. These waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class.

7. Oil and Grease. These waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portions of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life.

8. Taste and Odor. 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.

(5) Additional Minimum Criteria Applicable to All Surface Waters.

(a) Aesthetics. 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 of aquatic life.

(b) Bottom Pollutants or Alterations. All surface waters shall be free from pollutants in concentrations or combinations or from alterations that adversely affect the physical or chemical nature of the bottom, interfere with the propagation of fish or shellfish, or adversely affect populations of non-mobile or sessile benthic organisms.

(c) Nutrients. Unless naturally occurring, all surface waters shall be free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses and shall not exceed criteria established by the Department pursuant to 314 CMR 4.00 including, but not limited to, those established in 314 CMR 4.06(6)(c): *Table 28: Site-specific Criteria*. Any existing point source discharge containing nutrients in concentrations that would cause or contribute to cultural eutrophication, including the excessive growth of aquatic plants or algae, in any surface water shall be provided with the most appropriate treatment as determined by the Department, including, where necessary, highest and best practical treatment (HBPT) for POTWs and BAT for non-POTWs, to remove such nutrients to ensure protection of existing and designated uses. Human activities that result in the nonpoint source discharge of nutrients to any surface water may be required to be provided with cost effective and reasonable best management practices for nonpoint source control.

(d) Radioactivity. 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 Massachusetts Drinking Water Regulations as set forth in 310 CMR 22.09A: *Maximum Radionuclide Contaminant Levels, Monitoring Requirements and Analytical Methods Effective as of December 8, 2003.*

4.05: continued

(e) Toxic Pollutants. All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.

1. Generally Applicable Criteria. For each pollutant identified in 314 CMR 4.06(6)(d): *Table 29*: *Generally Applicable Criteria*, the concentrations identified or calculated for that pollutant in or pursuant to Table 29 shall be generally applicable criteria for all categories of surface waters, as specified therein; unless the Department determines that naturally occurring background concentrations are higher. Where the Department determines that naturally occurring background concentrations are higher, those concentrations shall be the allowable receiving water concentrations. (For purposes of convenience, Table 29 also references certain pollutants for which 314 CMR 4.05(3), (4) or (5)(a), (5)(b), (5)(c), (5)(d) or (5)(f) establish criteria.)

2. Use of Toxic Pollutant Criteria. For any discharge of a pollutant described in 314 CMR 4.05(5)(e) requiring a permit or approval:

a. Accumulation of Pollutants. Where appropriate, the Department shall use an additional margin of safety when establishing water quality based effluent limits to assure that pollutants do not persist in the environment or accumulate in organisms to levels that:

i. are toxic to humans, wildlife or aquatic life; or

ii. result in unacceptable concentrations in edible portions of marketable fish or shellfish or for the recreational use of fish, shellfish, other aquatic life or wildlife for human consumption.

b. Public Notice. Where toxic pollutant criteria as established under 314 CMR 4.00 are used to determine water quality based effluent limitations in a permit or approval, these effluent limitations and the criteria used shall be documented and subject to all applicable public notice requirements for the permit or approval.

c. Expression of Metal Concentrations. Metal concentrations in effluent limitations shall be expressed as total recoverable metals. Translation from dissolved metals criteria to total recoverable metals concentrations shall be based on the conversion factors set forth in Appendix F of Table 29a at 314 CMR 4.06(6)(d): *Table 29*: *Generally Applicable Criteria*.

d. Methods for Data Collection and Calculation of Instantaneous and Final Equation- and Model-based Criteria Values. Use of pollutant criteria established in 314 CMR 4.05(5)(e)1. which are equation- or model-based to develop water quality based effluent limits shall be subject to the following:

i. where ambient water quality data are required as inputs to equation- or model-based criteria to calculate instantaneous criteria values, sampling and analysis shall be conducted in compliance with a quality assurance project plan (QAPP) approved by MassDEP which shall include collection of sufficient and representative data to reflect the impact of spatial, temporal, and hydrological variability on water chemistry in the receiving water at locations outside the influence of effluent discharge including, but not limited to, upstream samples or measurements, which shall be developed using applicable approved procedures as set forth in 314 CMR 4.03(6); and

ii. all final criteria values shall be calculated by MassDEP from multiple instantaneous criteria values using procedures that MassDEP has determined provide protection over the full range of seasonal and flow conditions throughout the year, including when the pollutant is most bioavailable and therefore is likely to have increased toxic effect.

e. Unlisted Pollutants; Combinations of Pollutants. Any pollutant or combination of pollutants within the meaning of 314 CMR 4.05(5)(e) for which 314 CMR 4.05(5)(e)1. does not establish a generally applicable criterion shall not be discharged to surface waters in a quantity or manner that would:

i. exceed safe exposure levels for aquatic life as determined by toxicity testing using methods approved by MassDEP pursuant to 314 CMR 4.03(6); or

4.05: continued

ii. cause adverse human health effects due to the ingestion, inhalation or dermal absorption of such toxins attributable to such waters during their reasonable use as designated in 314 CMR 4.00; or

iii. result in a human health excess lifetime cancer risk level greater than 10^{-6} for individual carcinogens.

(f) Bacteria.

1. Inland Waters. Concentrations of bacteria in Inland Waters, subject to the reduced interval requirements set forth in 314 CMR 4.05(5)(f)3. as applicable, and except as otherwise provided in the seasonal exception set forth in 314 CMR 4.05(5)(f)4. as applicable, shall, on a year-round basis, satisfy 314 CMR 4.05(5)(f)1.a. for primary contact recreation and 314 CMR 4.05(5)(f)1.b. for secondary contact recreation:

a. for primary contact recreation:

i. E. coli concentrations shall not exceed 126 colony-forming units (cfu) per 100 mL, calculated as the geometric mean of all samples collected within any 90-day or smaller interval, andno more than 10% of all such samples shall exceed 410 cfu per 100 mL (the statistical threshold value); or

ii. enterococci concentrations shall not exceed 35 cfu per 100 mL, calculated as the geometric mean of all samples collected within any 90-day or smaller interval; and no more than 10% of all such samples shall exceed 130 cfu per 100 mL (the statistical threshold value).

b. for secondary contact recreation:

i. E. coli concentrations shall not exceed 244 colony-forming units (cfu) per 100 mL, calculated as the geometric mean of all samples collected within any 90-day or smaller interval, and no more than 10% of all such samples shall exceed 794 cfu per 100 mL (the statistical threshold value), or

ii. enterococci concentrations shall not exceed 68 cfu per 100 mL, calculated as the geometric mean of all samples collected within any 90-day or smaller interval, and no more than 10% of all such samples shall exceed 252 cfu per 100 mL (the statistical threshold value).

c. The preceding primary and secondary contact recreation criteria for Inland Waters are summarized in the following table:

Bacterial Indicator	Bacterial Criteria for Inland Waters (cfu/100mL)*			
	Primary Contact Recreation		Secondary Contact Recreation	
	Geometric Mean*	Statistical Threshold Value*	Geometric Mean*	Statistical Threshold Value*
E. coli	<126	<410	<244	<794
enterococci	<35	<130	<68	<252
*The geometric mean for at least one indicator shall not be exceeded in any 90-day or smaller interval. No more than 10% of all samples collected within that interval shall exceed the statistical threshold value for that indicator.				

4.05: continued

2. Coastal and Marine Waters. Concentrations of bacteria in Coastal and Marine Waters, subject to the reduced interval requirements set forth in 314 CMR 4.05(5)(f)3. as applicable, and except as otherwise provided in the seasonal exception set forth in 314 CMR 4.05(5)(f)4. as applicable, shall, on a year-round basis, satisfy 314 CMR 4.05(5)(f)2.a. for primary contact recreation and 314 CMR 4.05(5)(f)2.b. for secondary contact recreation:

a. for primary contact recreation, enterococci concentrations shall not exceed 35 cfu per 100 mL, calculated as the geometric mean of all samples collected within any 90-day or smaller interval; and no more than 10% of all such samples shall exceed 130 cfu per 100 mL (the statistical threshold value).

b. for secondary contact recreation, enterococci concentrations shall not exceed 68 cfu per 100 mL, calculated as the geometric mean of all samples collected within any 90-day or smaller interval, and no more than 10% of all such samples shall exceed 252 cfu per 100 mL (the statistical threshold value).

c. The preceding primary and secondary contact recreation criteria for Coastal and Marine waters are summarized in the following table:

Bacterial Indicator	Bacterial Criteria for Coastal and Marine Waters (cfu/100mL)*			
	Primary Contact Recreation		Secondary Contact Recreation	
	Geometric Mean*	Statistical Threshold Value*	Geometric Mean*	Statistical Threshold Value*
enterococci	<35	<130	<68	<252

*The geometric mean for this indicator shall not be exceeded in any 90-day or smaller interval. No more than 10% of all samples collected within that interval shall exceed the statistical threshold value for this indicator.

3. Reduced Interval Requirements. The geometric means and statistical threshold values for bacteria set forth in 314 CMR 4.05(5)(f)1. and 2. shall be calculated and assessed, respectively, over a 30-day or smaller interval in *lieu* of any otherwise applicable longer interval, if either of the conditions set forth in 314 CMR 4.05(5)(f)3.a.i. or ii. is met.

a. Conditions which require a reduced interval:

i. criteria are being applied to waters adjacent to any public or semi-public beach, at a location used for bathing and swimming purposes, and for the dates of operation of any such beach as posted or as otherwise established by the operator pursuant to 105 CMR 445.020: *Operation*; or

ii. criteria are being applied to segments impacted by CSO-, B(CSO)-, SB(CSO)-, or POTW-discharges.

b. Massachusetts Department of Public Health definitions: the terms "public bathing beach", "semi-public bathing beach" and "operator" as used in paragraph 314 CMR 4.05(5)(f)3.a.i. shall have the meanings as defined in 105 CMR 445.010: *Public Bathing Beach; Semi-Public Bathing Beach; and Operator*. (Standards and procedures for bathing water closures have been established by the Massachusetts Department of Public Health, at 105 CMR 445.000: *Minimum Standards for Bathing Beaches (State Sanitary Code, Chapter VII)*.)

4. Seasonal Exception. The primary contact recreation year-round minimum criteria for bacteria set forth in 314 CMR 4.05(5)(f)1.a.i or ii. and 2.a., as subject to the reduced interval requirements set forth in 314 CMR 4.05(5)(f)3., as applicable, may be applied on a seasonal basis in *lieu* of a year-round basis upon MassDEP's determination that, because of a reduction in primary contact recreation during a specified period of time, such criteria are not needed to be protective. Bases for such determinations may include identification of periods when frequency of use is reduced due to cold weather (typically, from November through March); and/or consideration of other relevant and appropriate factors. Any such determinations shall be documented in writing (*e.g.*, by the relevant provisions of surface water discharge permits issued pursuant to 314 CMR 3.00: *Surface Water Discharge Permit Program*) and made publicly available for review (*e.g.*, through MassDEP's Surface Water Discharge Permit webpage). For any determination that primary contact recreation criteria are not needed to be protective, secondary contact criteria shall apply.

4.05: continued

(g) Organoleptic Effect Pollutant Criteria. All surface waters shall be free from pollutants in concentrations that would exceed the organoleptic effect (*e.g.*, taste and odor) criteria established in 314 CMR 4.06(6)(e): *Table 30*: *Organoleptic Effect Criteria*. Provided, however, that the more stringent of the following organoleptic effect criteria, as applicable, shall control:

1. the numeric criteria set forth in said Table 30; and
2. the following narrative criteria:
   a. the taste and odor criteria set forth in 314 CMR 4.05(3) and (4); and
   b. the aesthetic criteria set forth in 314 CMR 4.05(5)(a).

(6) Determining Aquatic Life Criteria Applicability Where Fresh Water and Coastal and Marine Waters Mix. 314 CMR 4.05(6) establishes whether fresh water or coastal and marine water aquatic life criteria, which are set forth in 314 CMR 4.05(3), (4) and (5), and in Table 29a at 314 CMR 4.06(6)(d): *Table 29*: *Generally Applicable Criteria*, shall apply. 314 CMR 4.05(6) shall apply, regardless of the designated class of water pursuant to 314 CMR 4.06.

(a) For surface waters and segments in which the salinity is equal to or less than 1 part per thousand (ppt) 95% or more of the time, fresh water criteria shall apply.

(b) For surface waters and segments in which the salinity is equal to or greater than 10 ppt 95% or more of the time, coastal and marine criteria shall apply.

(c) For surface waters and segments in which the salinity is between 1 and 10 ppt 95% or more of the time, the more stringent of the fresh water or the coastal and marine criteria shall apply, except as provided in 314 CMR 4.05(6)(d).

(d) For surface waters and segments in which the salinity is between 1 and 10 ppt 95% or more of the time, as an alternative to 314 CMR 4.05(6)(c), either the fresh water or the coastal and marine criteria may be applied, respectively, where a scientific analysis demonstrates that the biology of the surface water is dominated either by fresh water aquatic life or by coastal and marine aquatic life.

(7) Site-specific Criteria. Where the Department has established site-specific numerical minimum criteria for a pollutant, as described in 314 CMR 4.05(2), such criteria shall supersede any otherwise applicable minimum numerical criteria established in 314 CMR 4.00. For each pollutant identified in 314 CMR 4.06(6)(c): *Table 28*: *Site-specific Criteria*, the concentrations listed for that pollutant for each specified surface water or segment shall constitute site-specific criteria. Such site-specific criteria shall control over the generally applicable criteria listed in 314 CMR 4.06(6)(d). If, however, the Department determines that a more stringent requirement for a particular pollutant is necessary for the same surface water or segment pursuant to the narrative criteria set forth in 314 CMR 4.05(3), (4) or (5), the more stringent requirement shall be the criteria for that surface water or segment.

4.06: Classification, Figures, and Tables

(1) Classification. For the purposes of applying 314 CMR 4.00, the surface waters of the Commonwealth are classified as shown in 314 CMR 4.06(2), (3), (4), (5) and (6)(b). The following terms used in the classification tables set forth in 314 CMR 4.06(6)(b): *Figure A*; *Figures and Tables 1 through 27*, have the following meanings:

(a) Boundary. a description of the boundaries of the segment being classified.

(b) Mile Points. for rivers and streams, the upstream and downstream mile points; it is also used to indicate the point at which a tributary enters the main stem of a river or stream.

(c) Class. the appropriate water use Class for each segment in accordance with 314 CMR 4.05.

(d) Qualifiers. indicates special considerations and uses applicable to the segment that may affect the application of criteria or antidegradation provisions of 314 CMR 4.00.

1. Public Water Supply denotes those surface waters that may be used as a source of public drinking water for a public water system as defined in 310 CMR 22.00: *Drinking Water*. They may be subject to more stringent regulation in accordance with 310 CMR 22.00, adopted pursuant to M.G.L. c. 111, and may have restricted use. These waters are designated for protection as Outstanding Resource Waters under 314 CMR 4.04(3). No discharge of dredged or fill material into wetlands or waters of the Commonwealth shall be allowed within 400 feet of the high water mark of a Class A surface water (exclusive of its tributaries), unless conducted by a public water system under 310 CMR 22.00, conducted by a public agency or authority for the maintenance or repair of existing public

4.06: continued

roads or railways, or conducted by a person granted a variance pursuant to 314 CMR 9.08: *Variance*. Any maintenance or repair of existing public roads or railways shall also include the removal or implementation of the highest and best practical method of treatment of stormwater discharges in accordance with 314 CMR 4.04(3) within the reasonable vicinity of the activity. Maintenance or repair of an existing public road or railway shall not include substantial reconstruction, substantial enlargement, replacement or realignment of any portion of the roadway or railway. The Department will presume that any reconstruction or enlargement is substantial and requires a variance under 314 CMR 9.08. The Department may determine that a public agency or authority has overcome the presumption based upon a showing that the activity proposed within 400 feet of the high water mark of a Class A surface water will result in the loss of less than 5000 square feet cumulatively of bordering and isolated vegetated wetlands and land under water, and that the entirety of the activity will improve water quality, or maintain water quality if removal or implementation of the highest and best practical method of treatment of stormwater discharges already has been achieved.

2. Public Water Supply – Abandoned denotes those surface water sources that were used as public water supplies and that meet the definition of existing use at 314 CMR 4.02, but have been abandoned as public water supplies pursuant to 310 CMR 22.25, are physically disconnected from a public water system, and are no longer maintained as active, inactive, or emergency sources as defined at 30 CMR 22.02. These surface waters are no longer subject to regulation under 310 CMR 22.00: *Drinking Water*. However, their designated use as a public water supply under 314 CMR 4.00 remains unchanged.

3. Outstanding Resource Waters denotes those waters that are designated for protection as Outstanding Resource Waters under 314 CMR 4.04(3). Outstanding Resource Waters are assigned at the discretion of the Department, as appropriate. An application to nominate a waterbody as an Outstanding Resource Water must be submitted in accordance with applicable Department application procedures and requirements.

4. Special Resource Waters denotes those waters designated for protection as Special Resource Waters under 314 CMR 4.04(4). Special Resource Waters are assigned at the discretion of the Department, as appropriate.

5. High Quality Waters denotes certain waters designated for protection under 314 CMR 4.04(2). Other waters as described in 314 CMR 4.04(2) also are high quality, although they are not necessarily denoted as high quality in the classification tables.

6. Shellfishing denotes those waters subject to more stringent regulation in accordance with the rules and regulations of the Massachusetts Division of Marine Fisheries pursuant to M.G.L. c. 130, § 75. These include applicable criteria of the National Shellfishing Sanitation Program. Approval for use of areas designated for shellfishing is issued by the Massachusetts Division of Marine Fisheries. To determine whether a particular water designated for shellfishing also is approved for use, the Massachusetts Division of Marine Fisheries and/or the appropriate local authority (usually the Shellfish Department) should be contacted.

7. Treated Water Supply denotes those Class B waters that are used as a source of public water supply after appropriate treatment. These waters may be subject to more stringent site-specific criteria established by the Department as appropriate to protect and maintain the use. *See* also, 310 CMR 22.00: *Drinking Water*.

8. Cold Water denotes those waters where dissolved oxygen and temperature criteria for cold water fisheries apply. Certain waters not designated as cold water in 314 CMR 4.00 may contain habitat that supports a cold water fish population and, in such cases, the cold water fish population and habitat shall be protected and maintained as existing uses. The Massachusetts Division of Fisheries and Wildlife is responsible for identifying cold water fish populations that meet their protocol, regardless of whether or not the water meets the cold water criteria in 314 CMR 4.00. Where a cold water fish population has been identified by the Division of Fisheries and Wildlife as meeting their protocol, but the water has not been documented to meet the cold water criteria in 314 CMR 4.00, the Department will protect the existing cold water fish population and its habitat as an existing use.

9. Warm Water denotes those waters where dissolved oxygen and temperature criteria for warm water fisheries apply.

4.06: continued

10. CSO denotes those waters identified as impacted by the discharge of combined sewer overflows; however, a long term control plan has not been approved or fully implemented for the CSO discharges.

11. Partial Use, B(CSO) and SB(CSO) denotes those waters occasionally subject to short-term impairment of swimming or other recreational uses due to untreated CSO discharges in a typical year, and the aquatic life community may suffer adverse impact yet is still generally viable. In these waters, the uses for Class B and Class SB waters are maintained after the implementation of long term control measures described in the approved CSO long term control plan, except as identified in such plan. The Department may designate a segment partial use, B(CSO) or SB(CSO), provided that:

a. a Department approved long term control plan provides justification for the overflows;

b. the Department finds through a use attainability analysis, and EPA concurs, that achieving a greater level of CSO control is not feasible for one of the reasons specified at 314 CMR 4.03(4);

c. existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected; and

d. public notice is provided through procedures for permit issuance under M.G.L. c. 21, §§ 26 through 53 and regulations promulgated pursuant to M.G.L. c. 30A. In addition, the Department will publish a notice in the Environmental Monitor. Other combined sewer overflows may be eligible for a variance granted pursuant to 314 CMR 4.03(4). When a variance is not appropriate, partial use may be designated for the segment after public notice and opportunity for a public hearing in accordance with M.G.L. c. 30A.

12. Vernal Pools. No point source discharge shall be allowed to a vernal pool certified by the Massachusetts Division of Fisheries and Wildlife; and no discharge of dredged or fill material shall be allowed to a vernal pool certified by the Massachusetts of Division of Fisheries and Wildlife, unless a variance is granted under 314 CMR 9.08: *Variance*.

(e) Treated Water Supply, Public Water Supply, Public Water Supply – Abandoned, and Shellfishing are assigned at the discretion of the Department, as appropriate.

(f) Cold Water and Warm Water are considered consistent with the national goal uses and are assigned whenever attainable, as applicable.

(2) Wetlands. Wetlands bordering Class A Outstanding Resource Waters are designated Class A Outstanding Resource Waters. Vernal pools are designated Class B Outstanding Resource Waters. All wetlands bordering other Class B, SB or SA Outstanding Resource Waters are designated as Outstanding Resource Waters to the boundary of the defined area. All other wetlands are designated Class B, High Quality Waters for inland waters and Class SA, High Quality Waters for coastal and marine waters.

(3) Active and Inactive Reservoirs. All active and inactive reservoirs approved by the Department's Drinking Water Program after December 29, 2006 as a source of public water supply are designated Class A, Outstanding Resource Waters, regardless of whether they are listed in 314 CMR 4.06(6)(b): *Figure A; Figures and Tables 1 through 27*.

(4) Tributaries. Tributaries to a Class A water qualified as a Public Water Supply or a Public Water Supply – Abandoned per 314 CMR 4.06(1)(d) include, but are not limited to, waterbodies from which water is manually diverted to the Class A Public Water Supply or Public Water Supply – Abandoned.

(5) Other Waters. Unless otherwise designated in 314 CMR 4.06: *Classification, Figures, and Tables*, other waters are Class B, and presumed High Quality Waters for inland waters and Class SA, and presumed High Quality Waters for coastal and marine waters. Inland fisheries designations and coastal and marine shellfishing designations for unlisted waters shall be made on a case-by-case basis as necessary.

4.06: continued

(6) Figures and Tables. All figures and tables referred to in 314 CMR 4.00 are set forth in a "List of Figures and Tables" in 314 CMR 4.06(6)(a). 314 CMR 4.06(6)(b) includes "*Figure A*, Commonwealth of Massachusetts River Basins and Coastal Drainage Areas" (showing river basins and coastal drainage areas) and Figures and Tables 1 through 27, inclusive (each figure providing a general orientation for the information in the corresponding table and each table showing those segments and classifications subject to qualifiers as set forth in 314 CMR 4.06(1)(d)). The class of each surface water identified in 314 CMR 4.06(6)(b) shall be as set forth therein. In cases of inconsistency between the figures and the tables in 314 CMR 4.06(6)(b), the information contained in the tables shall control. 314 CMR 4.06(6)(c) includes Table 28: *Site-specific Criteria*. The site-specific criteria for each surface water or segment identified in 314 CMR 4.06(6)(c) shall be as set forth therein, subject to the provisions of 314 CMR 4.05(2) and (7) as applicable. 314 CMR 4.06(6)(d) includes Table 29: *Generally Applicable Criteria*, consisting of Table 29a: *Aquatic Life Criteria and Table 29b*: *Human Health Criteria*. The generally applicable criteria for all surface waters identified in 314 CMR 4.06(6)(d) shall be as set forth therein. 314 CMR 4.06(6)(e) includes Table 30: *Organoleptic Effect Criteria*. The criteria set forth in 314 CMR 4.06(6)(e) shall be applicable to all surface waters in accordance with 314 CMR 4.05(5)(g). All appendices and footnotes to the tables shall be a part of 314 CMR 4.06(6): *Figures and Tables*.

4.06: continued

(a) List of Figures and Tables*.

NUMBER	TITLE
A (Figure only)	River Basins and Coastal Drainage Areas
1	Blackstone River Basin
2	Boston Harbor Drainage Area (formerly Boston Harbor Drainage System and Mystic, Neponset and Weymouth & Weir River Basins)
3	Buzzards Bay Coastal Drainage Area
4	Cape Cod Coastal Drainage Area
5	Charles River Basin
6	Chicopee River Basin
7	Connecticut River Basin
8	Deerfield River Basin
9	Farmington River Basin
10	French River Basin
11	Housatonic River Basin
12	Hudson River Basin (formerly Hoosic, Kinderhook and Bashbish)
13	Ipswich River Basin
14	Islands Coastal Drainage Area (formerly Martha's Vineyard and Nantucket)
15	Merrimack River Basin
16	Millers River Basin
17	Narragansett Bay and Mount Hope Bay Drainage Area
18	Nashua River Basin
19	North Coastal Drainage Area
20	Parker River Basin
21	Quinebaug River Basin
22	Shawsheen River Basin
23	South Coastal Drainage Area
24	Sudbury, Assabet, and Concord (SuAsCo) River Basin (formerly Concord)
25	Taunton River Basin
26	Ten Mile River Basin
27	Westfield River Basin
28 (Table only)	Site-specific Criteria
29 (Table only)	Generally Applicable Criteria: 29a. Aquatic Life Criteria 29b. Human Health Criteria
30 (Table only)	Organoleptic Effect Criteria

*DISCLAIMER: The river basin bounds, the coastal drainage area bounds, and the surface water classes depicted on the figures are approximations and may not be complete. They are intended for general orientation purposes, and should not be relied upon for precise locations of any such bounds or classifications. *See* 314 CMR 4.06(6): *Figures and Tables*

4.06: continued

(b) Figure A; Figures and Tables 1 through 27.

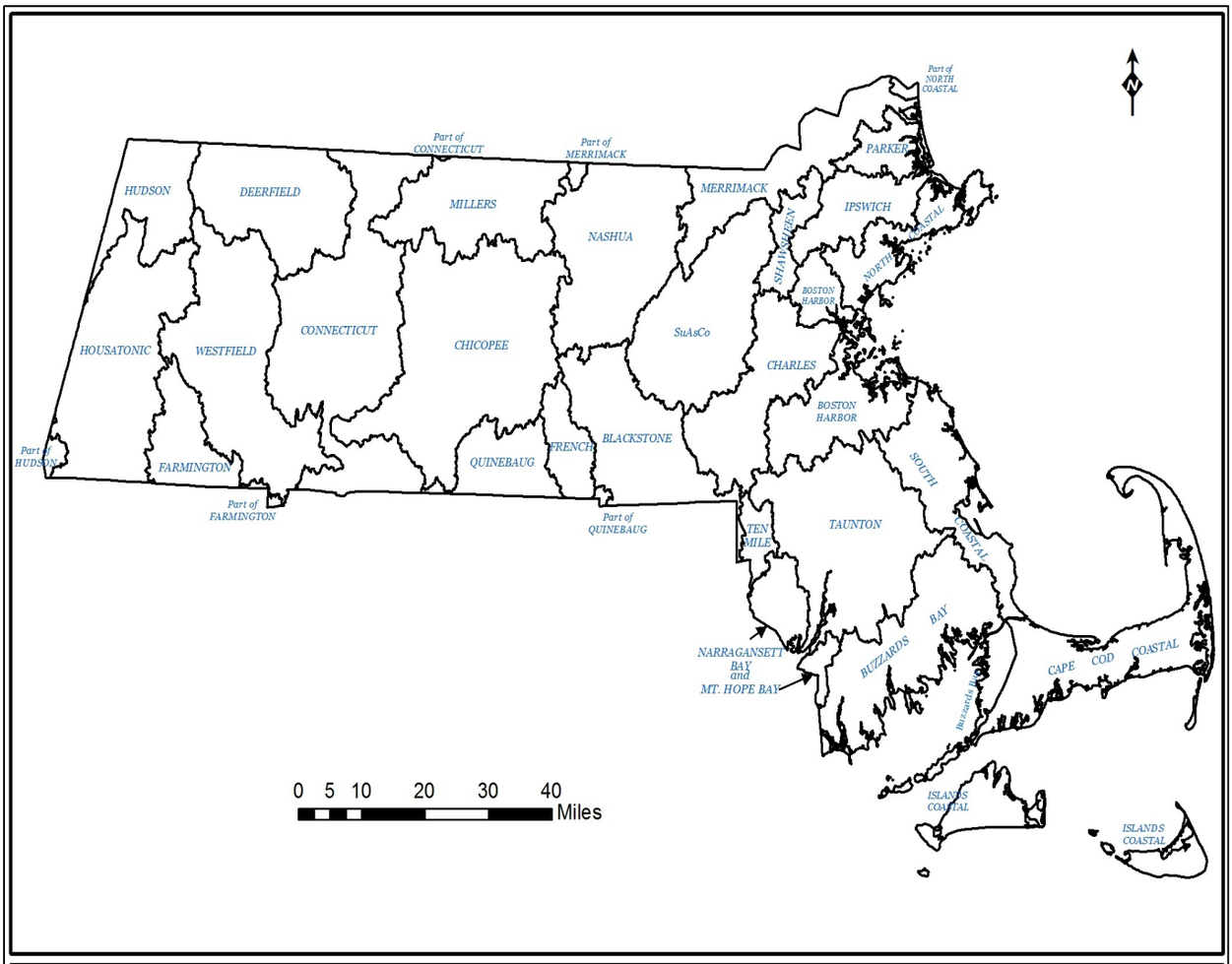
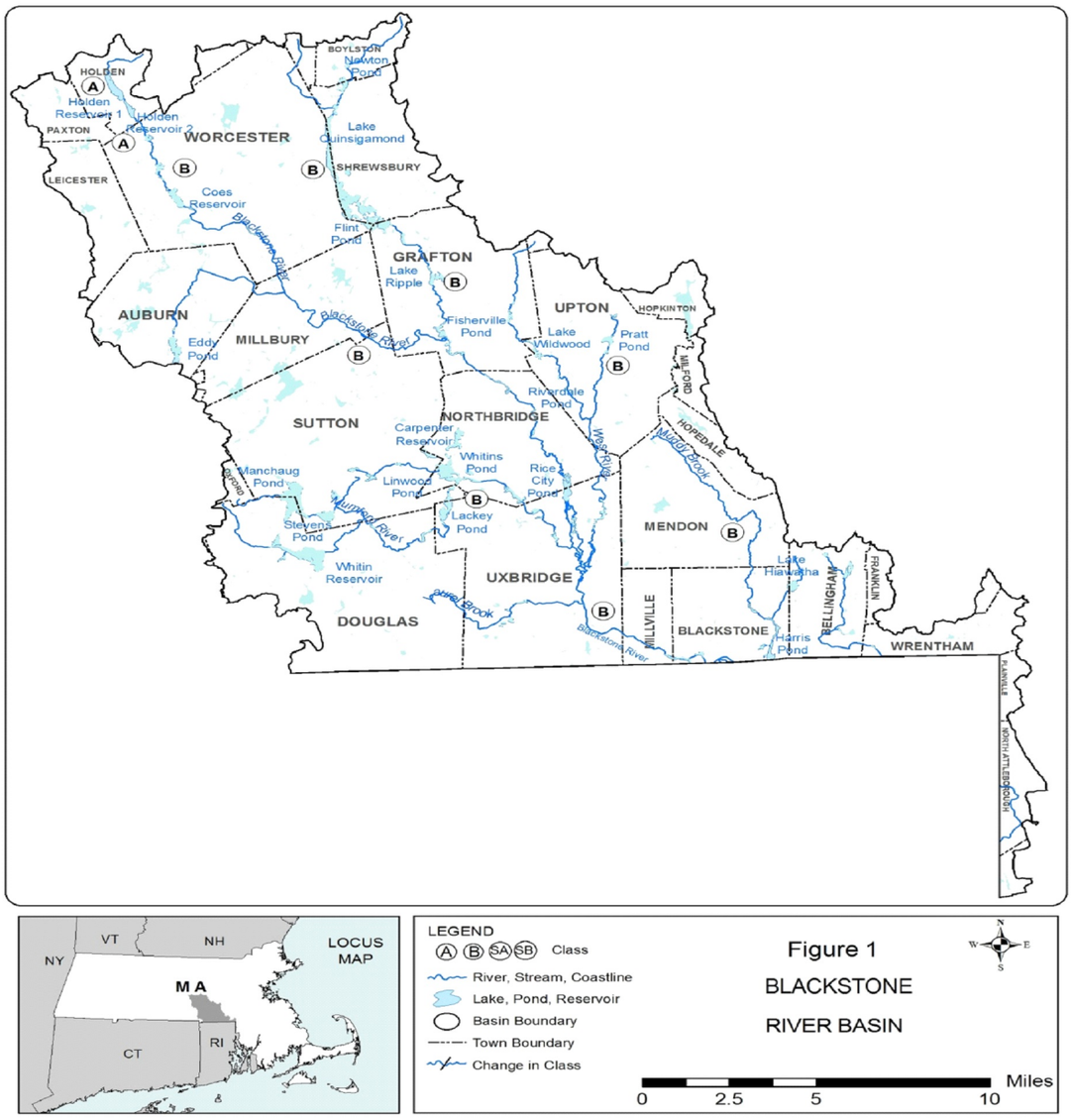


Figure A — **COMMONWEALTH OF MASSACHUSETTS RIVER BASINS AND COASTAL DRAINAGE AREAS**

4.06: continued



4.06: continued

TABLE 1 BLACKSTONE RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Kettle Brook	From outlet of Kettle Brook Reservoir #4, Paxton to dam at Reservoir #1, Leicester (flowing through and including Kettle Brook Reservoirs 1, 2 and 3) and those tributaries thereto	14.7 - 9.7	A	PWS ORW
	From dam at Reservoir #1, Leicester, to outlet of Waite Pond, Leicester	9.7 - 8.0	B	Warm Water
	From outlet of Waite Pond, Leicester, to inlet of Leesville Pond, Leicester	8.0 - 0.0	B	Warm Water
Leesville Pond	Entire pond in Auburn and Worcester		B	Warm Water
Unnamed stream	From outlet of Leesville Pond, Worcester, to inlet of Curtis Ponds, Worcester		B	Warm Water
Curtis Ponds	Entire ponds (North and South), Worcester		B	Warm Water
Middle River	From outlet of Coes Pond, Worcester, to confluence with an unnamed stream (Mill Brook), Worcester	2.5 - 0.0	B	Warm Water
Blackstone River	From confluence of Middle River and unnamed stream (Mill Brook), Worcester to outlet of Fisherville Pond, Grafton	48.8 - 39.8	B	Warm Water CSO
	Outlet of Fisherville Pond, Grafton, to MA-RI state line, Blackstone	39.8 - 20.0	B	Warm Water
Unnamed stream (Mill Brook)	From outlet of Indian Lake, Worcester, to confluence with Middle River, Worcester	3.0 - 0.0	B	Warm Water CSO
Quinsigamond River	Entire length, Grafton	5.3 - 0.0	B	Warm Water
Mumford River	Source in Sutton to Douglas POTW discharge, Douglas	14.5 - 9.0	B	Warm Water High Quality Water
	From Douglas POTW discharge, Douglas, to confluence with the Blackstone River, Uxbridge	9.0 - 0.0	B	Warm Water
West River	Source in Grafton to Upton POTW discharge, Upton		B	Cold Water High Quality Water
	From the Upton POTW discharge, Upton to confluence with the Blackstone River, Uxbridge	8.8 - 0.0	B	Warm Water

4.06: continued

TABLE 1 BLACKSTONE RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Mill River	From the outlet of North Pond, Milford, to the Mendon/Blackstone town line		B	Warm Water
	From the Mendon/Blackstone town line to a line 1000 feet northerly of and parallel to the MA-RI state line, Blackstone		B	Warm Water Treated Water Supply
Beaver Brook	Entire length, Worcester	3.0 - 0.0	B	Warm Water High Quality Water
Weasel Brook	Entire length, Worcester	3.0 - 0.0	B	Warm Water High Quality Water
Kettle Brook Reservoir No. 4	Entire reservoir in Paxton and those tributaries thereto		A	PWS ORW
Lynde Brook Reservoir	Entire reservoir in Leicester and those tributaries thereto		A	PWS ORW
#2 Holden Reservoir	Entire reservoir in Holden and those tributaries thereto		A	PWS ORW
#1 Holden Reservoir	Entire reservoir in Holden and those tributaries thereto		A	PWS ORW
Wallum Lake	The northern portion of the lake in Douglas to a line 1000 feet northerly of and parallel to the MA-RI state line		B	Treated Water Supply
MA interstate surface waters that flow into Rhode Island PWSs	From a line in MA which is 1000 feet upstream from and parallel to the MA-RI state line, to that state line (including, but not limited to, the relevant portions of Wallum Lake in Douglas, Mill River in Blackstone, and the entirety of Robin Hollow Pond in North Attleborough)		A	PWS ORW
Coal Mine Brook	Source in Worcester to inlet of Lake Quinsigamond, Worcester		B	Cold Water
Cold Spring Brook	Entire length, Uxbridge		B	Cold Water

4.06: continued

TABLE 1 BLACKSTONE RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Scott Brook	Source in Holden to inlet of Holden Reservoir No 1, Holden		A	Cold Water PWS ORW
Warren Brook	Entire length, Upton[1]		B	Cold Water

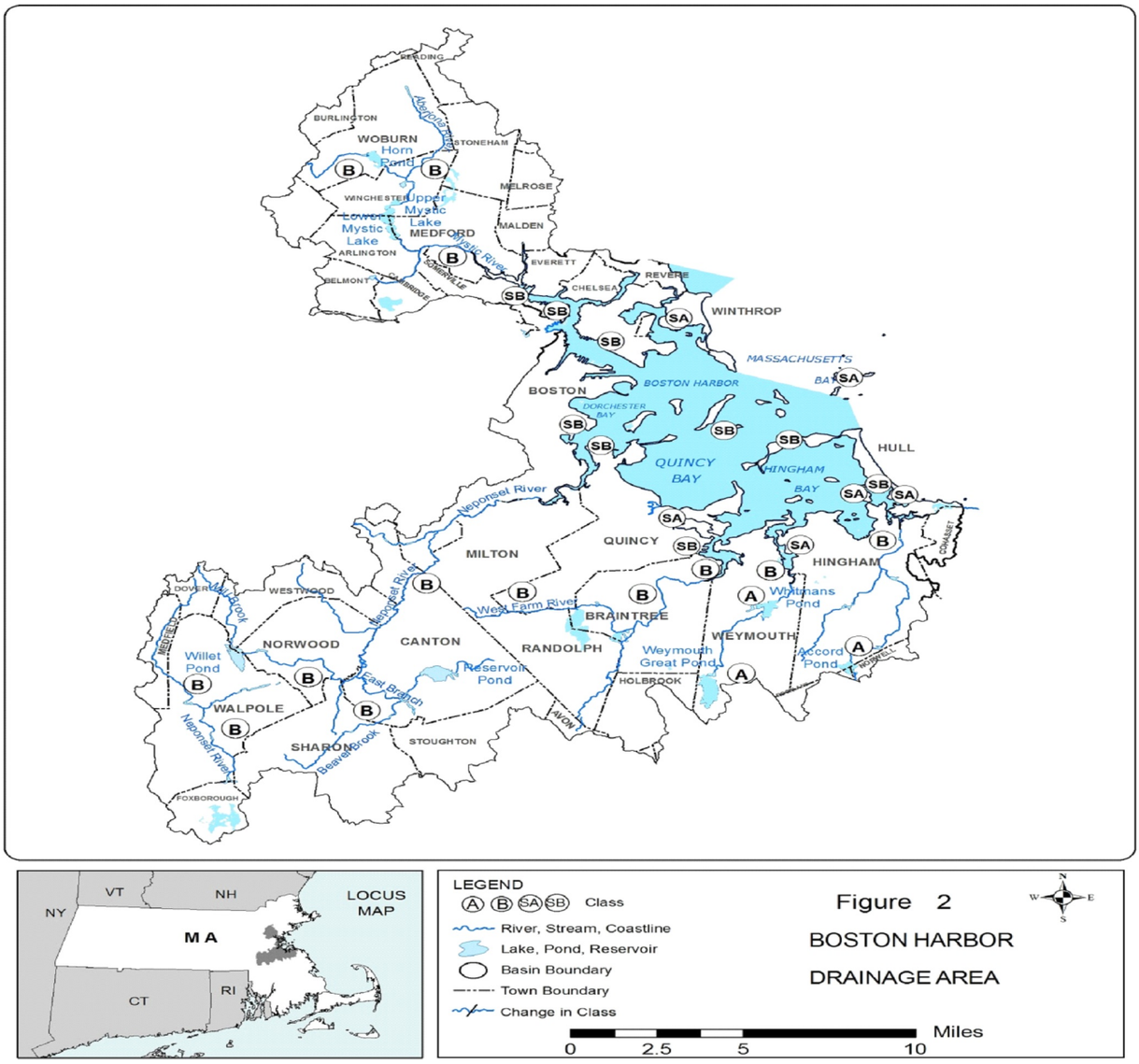
*Acronyms:
CSO = Combined Sewer Overflow
ORW = Outstanding Resource Water
PWS = Public Water Supply

† Names cited in parentheses are unofficial, locally-used names

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

[1] Note that all or a portion of this surface water is within the Miscoe, Warren and Whitehall Watersheds Area of Critical Environmental Concern.

4.06: continued



4.06: continued

TABLE 2 BOSTON HARBOR DRAINAGE AREA*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Boston Harbor	Entire harbor, from the respective seaward boundaries of Boston Inner Harbor, and Pleasure, Dorchester, Quincy, and Hingham bays, easterly to a straight line drawn from the southerly tip of Deer Island to Boston Lighthouse on Little Brewster Island, then south to Point Allerton in Hull		SB	Shellfishing
Pleasure Bay	Entire semi-enclosed bay, its seaward boundary formed by a straight line drawn from the southerly tip of Castle Island to the northerly tip of Head Island, Boston		SB	Shellfishing
Boston Inner Harbor	Entire inner harbor, inclusive of the Reserved, Fort Point and Little Mystic channels, from the respective mouths of the Charles, Mystic, and Chelsea rivers, southeasterly to its seaward boundary formed by a straight line drawn from the southern tip of Governors Island to Fort Independence, Boston		SB(CSO)	
Island End River	Entire river, Everett/Chelsea, to confluence with the Mystic River		SB(CSO)	
Chelsea River (Chelsea Creek)	Entire river, from the confluence of Mill Creek, Chelsea/Revere to its mouth at Boston Inner Harbor, Boston/Chelsea		SB(CSO)	
Dorchester Bay	Entire bay, from the mouth of the Neponset River, Boston/Quincy, northeasterly to the bay's seaward boundary formed by straight lines drawn from the southerly tip of Head Island, Boston, to the north side of Thompson Island, Boston; and from the southerly tip of Thompson Island to Chapel Rocks, Quincy		SB	Shellfishing
Quincy Bay	The southern portion of Quincy Bay in Quincy, southerly of a seaward boundary formed by a straight line drawn from Bromfield Street near 692 Quincy Shore Drive (the Wollaston Yacht Club) northeast to 42° 17' 3" N, 71° 00' 1" W (buoy "C 1") southeast to Houghs Neck near Sea Street and Peterson Road (formerly referred to as the "Willows"), Quincy		SA	Shellfishing

4.06: continued

TABLE 2 BOSTON HARBOR DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Quincy Bay (cont.)	The northern portion of Quincy Bay: northeasterly from the seaward boundary of the southern portion, to a seaward boundary formed by a straight line drawn from the eastern tip of Moon Head to the northern tip of Nut Island, Quincy		SB	Shellfishing
Hingham Harbor	Entire harbor in Hingham, southerly of the seaward boundary formed by a straight line drawn from Crow Point to Worlds End Promontory		SA	Shellfishing
Hingham Bay	Entire bay, westerly of the seaward boundaries of Hull Bay and Hingham Harbor and of the mouth of the Weir River; and northerly of the mouths of the Weymouth Fore and Weymouth Back rivers; to its northwest and seaward boundary formed by a straight line drawn from the northerly tip of Nut Island, Quincy, to Peddocks Island at the southerly point of West Head, Hull; and from the northeastern point of Peddocks Island, Hull, to Windmill Point, Hull		SB	Shellfishing
Hull Bay	Entire bay, its western and seaward boundary formed by straight lines drawn from Windmill Point, Hull, to Bumkin Island (Bumpkin Island), Hingham; and from the easterly point of Bumkin Island to the westerly point of Sunset Point, Hull		SB	Shellfishing
Other coastal and marine waters	In the Boston Harbor Drainage Area		SB	Shellfishing
Aberjona River	Source in Reading to outlet of Mishawum Lake, Woburn	9.5 - 5.9	B	Warm Water
	Outlet of Mishawum Lake, Woburn to inlet of Upper Mystic Lake, Winchester	5.9 - 0.0	B	Warm Water
Upper Mystic Lake	Entire lake, Winchester/Arlington /Medford		B	Warm Water
Lower Mystic Lake	Entire lake, Arlington/Medford		B	Warm Water
Mystic River	From outlet of Lower Mystic Lake, Arlington/Medford to Amelia Earhart Dam, Somerville/Everett	7.4 - 2.0	B	Warm Water CSO[1]

4.06: continued

TABLE 2
BOSTON HARBOR DRAINAGE AREA (continued)*

Surface Water Name†	Surface Water or Segment Boundary	Mile Point‡	Class	Qualifiers
Mystic River (cont.)	Amelia Earhart Dam, Somerville/Everett to its mouth at Boston Inner Harbor, Chelsea/ Charlestown	2.0 - 0.0	SB(CSO)	Shellfishing
Malden River	Entire length, from source in Malden to confluence with the Mystic River, Everett/Medford	1.9 - 0.0	B	Warm Water
Alewife Brook	Entire length, source in Cambridge to confluence with Mystic River, Arlington/Somerville		B	Warm Water CSO[2]
Little River	The portion of the Little River, formerly included as part of Alewife Brook, beginning 2,800 feet (approximately 0.5 miles) upstream of the confluence with Alewife Brook, Cambridge, to the confluence with Alewife Brook, Cambridge		B	Warm Water CSO[3]
Horn Pond	Entire pond to outlet in Woburn		B	Warm Water
Belle Isle Inlet	Entire inlet from tidegate at Bennington Street Boston/Revere to confluence with Winthrop Bay, Boston/Winthrop and those tributaries thereto[4]		SA	Shellfishing ORW
North Reservoir	Entire reservoir to outlet in Winchester and those tributaries thereto		A	PWS ORW
Middle Reservoir	Entire reservoir to outlet in Medford and those tributaries thereto		A	PWS ORW
South Reservoir	Entire reservoir to outlet in Medford and those tributaries thereto		A	PWS ORW
Fresh Pond	Entire pond to outlet in Cambridge and those tributaries thereto		A	PWS ORW
Neponset Reservoir	Entire reservoir to outlet into Crackrock Pond, Foxborough		B	Warm Water High Quality Water

4.06: continued

TABLE 2 BOSTON HARBOR DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Neponset River	From outlet of Neponset Reservoir, Foxborough, to confluence with Mother Brook, Boston (inclusive of Crackrock Pond)		B	Warm Water
	From confluence with Mother Brook, Boston, to Milton Lower Falls Dam (Neponset River Baker Chocolate Dam, NAT ID: MA0193), Milton/Boston	7.9 - 4.2	B	Warm Water
Neponset River (cont.)	Tidal portion, from Milton Lower Falls Dam (Neponset River Baker Chocolate Dam, NAT ID: MA0193), Milton/Boston to its mouth at Dorchester Bay, Boston/Quincy	4.2 - 0.0	SB	Shellfishing
Weymouth Fore River	Entire river to its mouth at Hingham Bay formed by a straight line between Lower Neck, Weymouth and Wall Street on Houghs Neck, Quincy		SB, B[5]	Shellfishing[6] Warm Water[6]
Weymouth Back River	From the base of the fish ladder north of Commercial Street, Weymouth, to its mouth at Hingham Bay formed by a straight line between Lower Neck, Weymouth and Wompatuck Road, Hingham[7]		SA, B[5]	Shellfishing[6] Warm Water[6] ORW
Weir River	From confluence of Crooked Meadow River and Fulling Mill Brook to its mouth at Hingham Bay[8] formed by a straight line from the northerly point of Worlds End, Hingham, to Nantasket Road near Beech Avenue, Hull		SA, B[5]	Shellfishing[6] ORW
Fresh River	Entire river in Weymouth/Hingham[7], to confluence with the Weymouth Back River		SA, B[5]	Warm Water[6]
Cranberry Brook	From the outlet of Cranberry Pond, Braintree, to confluence with the Cochato River, Braintree[9]		B	ORW
Cranberry Pond	Entire pond to outlet in Braintree[9]		B	ORW
Bouve Pond	Entire pond in Hingham[7]		B	Warm Water ORW
Brewer Pond	Entire pond in Hingham[7]		B	Warm Water ORW
Straits Pond	Entire pond in Hull and Cohasset[8]		B	Warm Water ORW

4.06: continued

TABLE 2 BOSTON HARBOR DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Great Pond	Entire pond to outlet in Braintree and those tributaries thereto		A	PWS ORW
Upper Reservoir of Great Pond	Entire reservoir to outlet in Braintree/Randolph and those tributaries thereto		A	PWS ORW
Whitmans Pond	Entire pond to outlet in Weymouth and those tributaries thereto		A	PWS ORW
Richardi Reservoir	Entire reservoir to outlet in Braintree and those tributaries thereto		A	PWS ORW
Weymouth Great Pond (Great Pond)	Entire pond to outlet in Weymouth and those tributaries thereto		A	PWS ORW
Accord Pond	Entire pond to outlet in Hingham and those tributaries thereto		A	PWS ORW
Accord Brook	From outlet of Accord Pond, Hingham, to water supply intake, Hingham, and those tributaries thereto		A	PWS ORW

*Acronyms:
ACEC = Area of Critical Environmental Concern
CSO = Combined Sewer Overflow
NAT ID = National Inventory of Dams
ORW = Outstanding Resource Water
PWS = Public Water Supply

† Names cited in parentheses are unofficial, locally-used names.

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

[1] Discharges from the jointly-permitted Massachusetts Water Resources Authority and City of Somerville CSO 007a (also known as MWR205a) within this segment are subject to a variance titled, 'Final Determination to Adopt a Water Quality Standards Variance for Combined Sewer Overflow Discharges to Alewife Brook/Upper Mystic River Basin', effective through 8-31-2029. This variance is available on MassDEP's website.

[2] Discharges from multiple CSOs permitted to the Massachusetts Water Resources Authority, the City of Somerville, and the City of Cambridge within this segment are subject to the variance described in footnote 1 above.

[3] Discharges from Massachusetts Water Resources Authority's CSO MWR003 within this segment are subject to the variance described in footnote 1 above.

[4] Note that all or a portion of this surface water is within the Rumney Marshes ACEC.

[5] Coastal and marine waters Class SA or SB as designated; fresh waters Class B.

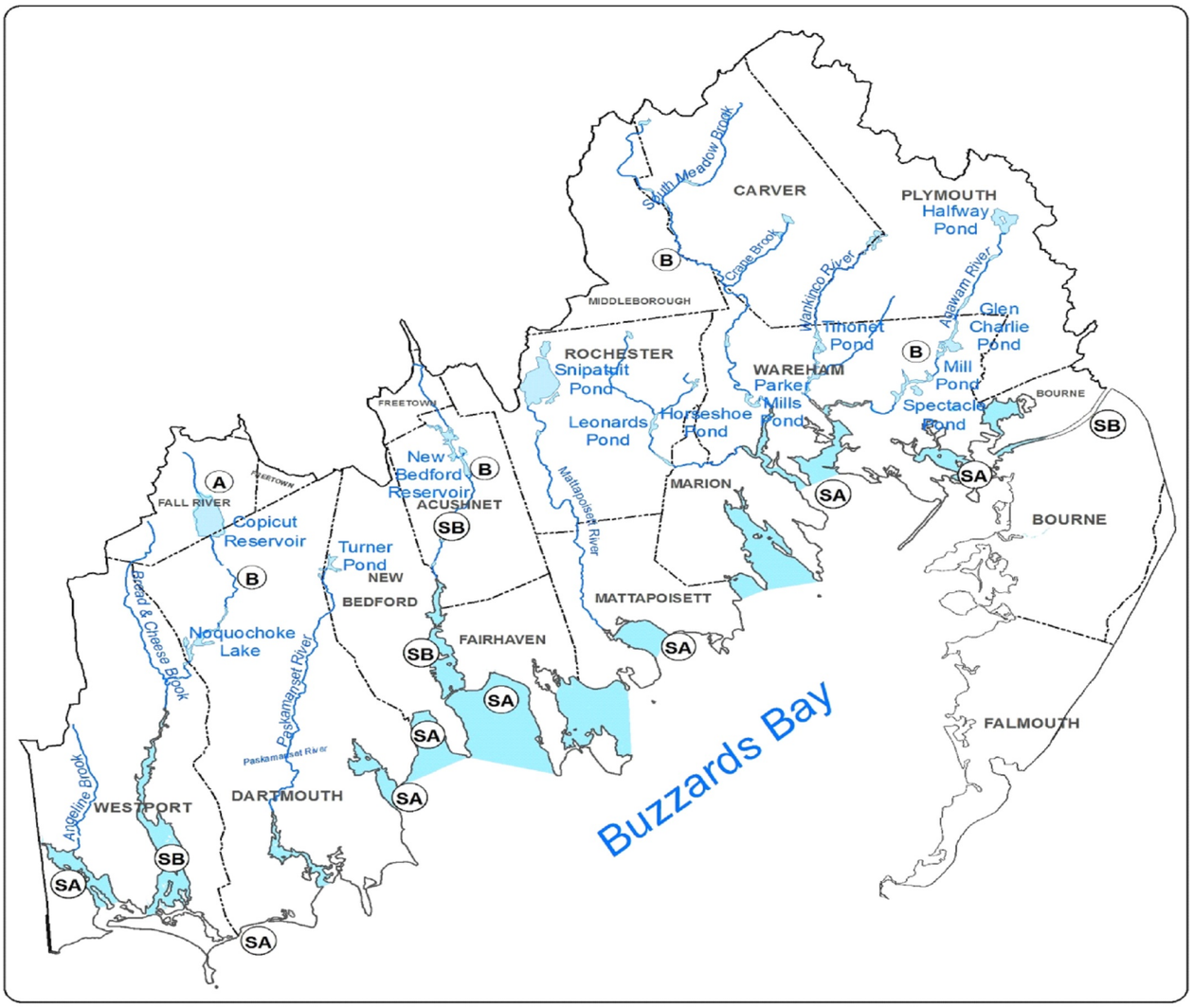
[6] Shellfishing applies to coastal and marine waters only; warm water applies to fresh waters only.

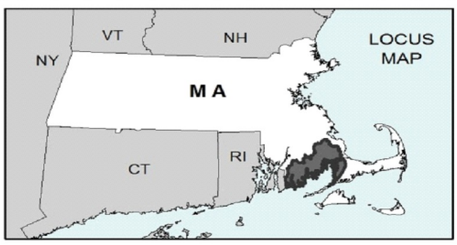
[7] Note that all or a portion of this surface water is within the Weymouth Back River ACEC.

[8] Note that all or a portion of this surface water is within the Weir River ACEC.

[9] Note that all or a portion of this surface water is within the Cranberry Brook Watershed ACEC.

4.06: continued





LEGEND

Ⓐ Ⓑ ⓈⒶ ⓈⒷ Class

River, Stream, Coastline

Lake, Pond, Reservoir

Basin Boundary

Town Boundary

Change in Class

Figure 3

BUZZARDS BAY

DRAINAGE BASIN

N W E S

Miles

0 2.5 5 10

4.06: continued

TABLE 3 BUZZARDS BAY COASTAL DRAINAGE AREA*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Cape Cod Canal	The portion of the canal in Sandwich		SB	Shellfishing
	The portion of the canal in Bourne		SB	Shellfishing
Buttermilk Bay	Entire bay in Bourne/Plymouth		SA	Shellfishing
Onset Bay	Entire bay in Wareham		SA	Shellfishing
Pocasset River[l]	From the outlet of Mill Pond, Bourne to the mouth at confluence with Buzzards Bay, Bourne		SA	Shellfishing ORW
Agawam River	Source in Plymouth to Wareham POTW discharge, Wareham	Above 2.2	B	Warm Water High Quality Water
	From Wareham POTW discharge to confluence with the Wareham River	2.2 - 0.0	SB	Shellfishing
Wareham River	Entire length, from confluence of Wankinko and Agawam Rivers at Route 6 bridge, Wareham to confluence with Buzzards Bay, Wareham (inclusive of Marks Cove)		SA	Shellfishing High Quality Water
Weweantic River	Source in Carver to outlet of Horseshoe Pond, Wareham	Above 4.4	B	Warm Water High Quality Water
	From the outlet of Horseshoe Pond, Wareham to confluence with Buzzards Bay, Marion/Wareham	4.4 - 0.0	SA	Shellfishing High Quality Water
Sippican River	Source in Rochester to County Road, Marion/Wareham	Above 2.1	B	Warm Water High Quality Water
	From County Road, Marion/Wareham to confluence with the Weweantic River	2.1 - 0.0	SA	Shellfishing High Quality Water
Sippican Harbor	Entire harbor		SA	Shellfishing
Aucoot Cove	Entire cove		SA	Shellfishing

4.06: continued

TABLE 3 BUZZARDS BAY COASTAL DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Mattapoisett Harbor	Entire harbor, from the mouth of the Mattapoisett River, Mattapoisett to an imaginary line drawn from Ned Point to a point of land between Bayview Avenue and Grandview Avenue, Mattapoisett.		SA	Shellfishing
Nasketucket Bay	Entire bay, from the confluence with Little Bay, Fairhaven to Buzzards Bay along Causeway Road, Fairhaven (on the south) and along an imaginary line drawn from the southern tip of Brant Island, Mattapoisett to the eastern tip of West Island, Fairhaven (includes Shaws Cove and Round Cove).		SA	Shellfishing
New Bedford Reservoir	Entire reservoir to its outlet in Acushnet		B	Warm Water High Quality Water
Acushnet River	From outlet of New Bedford Reservoir, Acushnet, to Tarkin Hill Bedford/Acushnet	7.0 - 3.3	B	Warm Water High Quality Water
Acushnet River (cont.)	From Tarkiln Hill Road/Main Street, New Bedford/Acushnet to Rt. 6, New Bedford/ Fairhaven	3.3 - 0.0	SB	Shellfishing CSO
Inner New Bedford Harbor		1.2 - 0.0	SB	Shellfishing CSO
Outer New Bedford Harbor	Entire harbor, from the hurricane barrier, Fairhaven/New Bedford to an imaginary line drawn from Wilbur Point, Fairhaven to Clarks Point, New Bedford		SA	Shellfishing
Clarks Cove	Entire semi-enclosed cove, landward of an imaginary line drawn between Clarks Point, New Bedford and Ricketsons Point, Dartmouth		SA	Shellfishing CSO
Apponagansett Bay	Entire bay, from the mouth of Buttonwood Brook, Dartmouth to an imaginary line drawn from Ricketsons Point, Dartmouth to Samoset Street near North Avenue, Dartmouth		SA	Shellfishing
Slocums River	From confluence with the Paskamanset River, Dartmouth, to confluence with Buzzards Bay, Dartmouth		SA	Shellfishing High Quality Water

4.06: continued

TABLE 3 BUZZARDS BAY COASTAL DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Westport River, East Branch	From the outlet of Noquochoke Lake, Dartmouth, to Old County Road, Westport	12.0 - 10.0	B	Warm Water High Quality Water
	From Old County Road, Westport to confluence with Westport Harbor and Horseneck Channel	10.0 - 0.0	SB	Shellfishing High Quality Water
Westport River, West Branch	Entire length, from the outlet of Grays Mill Pond, Westport to the mouth at confluence with Westport Harbor/Westport River, Westport		SA	Shellfishing High Quality Water
Freeman Pond	Entire pond in Bourne[1]		SA, B[2]	Warm Water[3] ORW
Mill Pond	Entire pond in Bourne[1]		SA, B[2]	Warm Water[3] ORW
Shop Pond	Entire pond in Bourne[1]		SA, B[2]	Warm Water[3] ORW
Upper Pond	Entire pond in Bourne[1]		SA, B[2]	Warm Water[3] ORW
Copicut Reservoir	Entire reservoir to outlet in Fall River and Dartmouth and those tributaries thereto		A	PWS ORW
Sand Pond Reservoir	Entire reservoir to outlet in Wareham and those tributaries thereto		A	PWS ORW

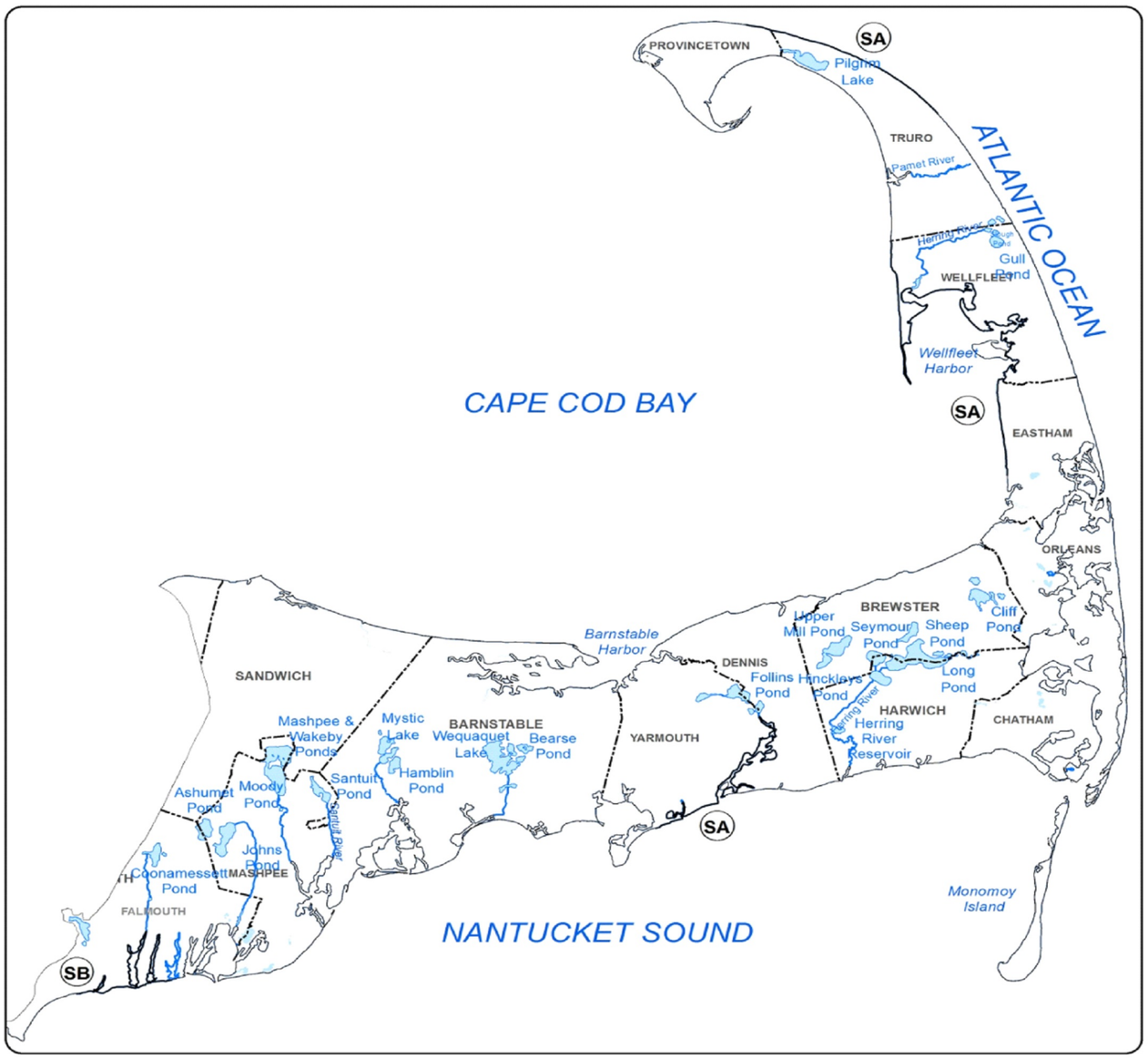
*Acronyms:
CSO = Combined Sewer Overflow
ORW = Outstanding Resource Water
PWS = Public Water Supply

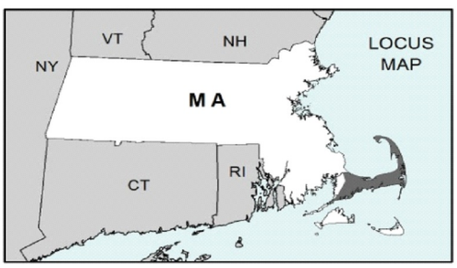
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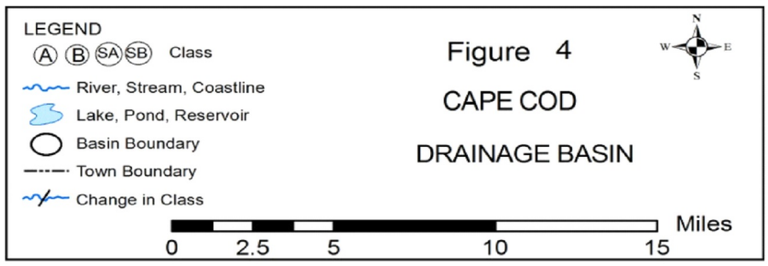
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[1] Note that all or a portion of these surface waters are within the Pocasset River Area of Critical Environmental Concern.
[2] Coastal and marine waters Class SA; fresh waters Class B.
[3] Warm water applies to fresh waters only.

4.06: continued







4.06: continued

TABLE 4 CAPE COD COASTAL DRAINAGE AREA*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Scorton Harbor	Entire harbor		SA	Shellfishing
Scorton Creek	Source in Sandwich to confluence with Scorton Harbor and those tributaries thereto		SA, B[1]	Shellfishing[2]
Barnstable Harbor	Entire area, from the mouths of Scorton and Spring creeks, Barnstable east to an imaginary line drawn from Beach Point to the western edge of the Mill Creek estuary, Barnstable but excluding Freezer Point and the developed marina[3]		SA	Shellfishing ORW
Broad Sound	Entire sound		SA	Shellfishing
Bass Creek	Entire creek		SA	Shellfishing
Brickyard Creek	Entire creek		SA, B[1]	Shellfishing[2]
Mill Creek	Entire creek		SA	Shellfishing
Wells Creek	Entire creek		SA	Shellfishing
Namskaket Creek	Entire creek[4]		SA, B[1]	Shellfishing[2] ORW
Little Namskaket Creek	Entire creek[4]		SA, B[1]	Shellfishing[2] ORW
Rock Harbor Creek	Entire creek[4]		SA, B[1]	Shellfishing[2] ORW
Boat Meadow River	Entire river[4]		SA, B[1]	Shellfishing[2] ORW
Herring River	Entire river[4]		SA, B[1]	Shellfishing[2] ORW
Pleasant Bay	Entire bay and those tributaries thereto[5]		SA, B[1]	Shellfishing[2] ORW
Ryder Cove	Portion of the surface water within the Pleasant Bay ACEC, Chatham		SA	ORW
Bassing Harbor	Portion of the surface water within the Pleasant Bay ACEC, Chatham		SA	ORW
Frost Fish Creek	Portion of the surface water within the Pleasant Bay ACEC, Chatham		SA, B[1]	ORW
Muddy Creek	Portion of the surface water within the Pleasant Bay ACEC, Chatham		SA	ORW
Round Cove	Portion of the surface water within the Pleasant Bay ACEC, Harwich		SA	ORW
Namequoit River	Portion of the surface water within the Pleasant Bay ACEC, Orleans		SA	ORW
The River	Portion of the surface water within the Pleasant Bay ACEC, Orleans		SA	ORW

4.06: continued

TABLE 4 CAPE COD COASTAL DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
The Horseshoe	Portion of the surface water within the Pleasant Bay ACEC, Orleans		SA	ORW
The Narrows	Portion of the surface water within the Pleasant Bay ACEC, Orleans		SA	ORW
Frostfish Cove	Portion of the surface water within the Pleasant Bay ACEC, Orleans		SA	ORW
Hog Island Creek	Portion of the surface water within the Pleasant Bay ACEC, Orleans		SA	ORW
Broad Creek	Portion of the surface water within the Pleasant Bay ACEC, Orleans		SA	ORW
Waquoit Bay	Entire bay and those tributaries thereto[6]		SA, B[1]	Shellfishing[2] ORW
Childs River	Portion of the surface water within the Waquoit Bay ACEC, Falmouth		SA, B[1]	ORW
Quashnet River	Portion of the surface water within the Waquoit Bay ACEC, Falmouth		SA, B[1]	ORW
Red Brook	Portion of the surface water within the Waquoit Bay ACEC, Mashpee		SA, B[1]	ORW
Falmouth Inner Harbor	Falmouth		SB	Shellfishing
Herring Pond (Coles Pond)	Entire pond in Eastham[4]		SA, B[1]	Warm Water[2] ORW
Cedar Pond	Entire pond in Orleans[4]		SA, B[1]	Warm Water[2] ORW
Stillwater Pond	Entire pond in Chatham[5]		B	Warm Water ORW
Lovers Lake	Entire lake in Chatham[5]		B	Warm Water ORW
Mill Pond	Entire pond in Chatham/East Harwich[5]		B	Warm Water ORW
Ministers Pond	Entire pond in Chatham[5]		B	Warm Water ORW
Crows Pond	Entire pond in Chatham[5]		SA	ORW
Pilgrim Lake (Dean Sparrows Pond)	Entire lake in Orleans[5]		B	Warm Water ORW
Quanset Pond	Entire pond in Orleans[5]		SA	ORW

4.06: continued

TABLE 4 CAPE COD COASTAL DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Crystal Lake (Fresh Pond)	Entire lake in Orleans[5]		B	Warm Water ORW
Paw Wah Pond	Entire pond in Orleans[5]		SA	ORW
Uncle Seths Pond	Entire pond in Orleans[5]		B	Warm Water ORW
Sarahs Pond	Entire pond in Orleans[5]		B	Warm Water ORW
Areys Pond	Entire pond in Orleans[5]		SA	ORW
Gould Pond	Entire pond in Orleans[5]		B	Warm Water ORW
Kescayo Gansett Pond	Entire pond in Orleans[5]		SA	ORW
Meeting House Pond	Entire pond in Orleans[5]		SA	ORW
Bourne Pond	Entire pond in Falmouth[6]		B	Warm Water ORW
Bog Pond	Entire pond in Falmouth[6]		SA, B[1]	Warm Water[2] ORW
Caleb Pond	Entire pond in Falmouth[6]		SA	ORW
Hamblin Pond	Entire pond in Falmouth/Mashpee[6]		SA	ORW
Flat Pond	Entire pond in Mashpee[6]		SA, B[1]	Warm Water[2] ORW
Jehu Pond	Entire pond in Mashpee[6]		SA	ORW
Jim Pond	Entire pond in Mashpee[6]		B	Warm Water ORW
Lily Pond (Little Flat Pond)	Entire pond in Mashpee[6]		SA, B[1]	Warm Water[2] ORW
Sage Lot Pond	Entire pond in Mashpee[6]		SA	ORW
Witch Pond	Entire pond in Mashpee[6]		B	Warm Water ORW
Long Pond (Long Pond Reservoir)	Entire pond to outlet in Falmouth and those tributaries thereto		A	PWS ORW

4.06: continued

TABLE 4 CAPE COD COASTAL DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Atlantic Ocean and other surface waters within/bordering the Cape Cod National Seashore	Waters within and adjacent (within 1,000 feet seaward of mean low water) to the Cape Cod National Seashore		SA, B[1]	Shellfishing[2] ORW

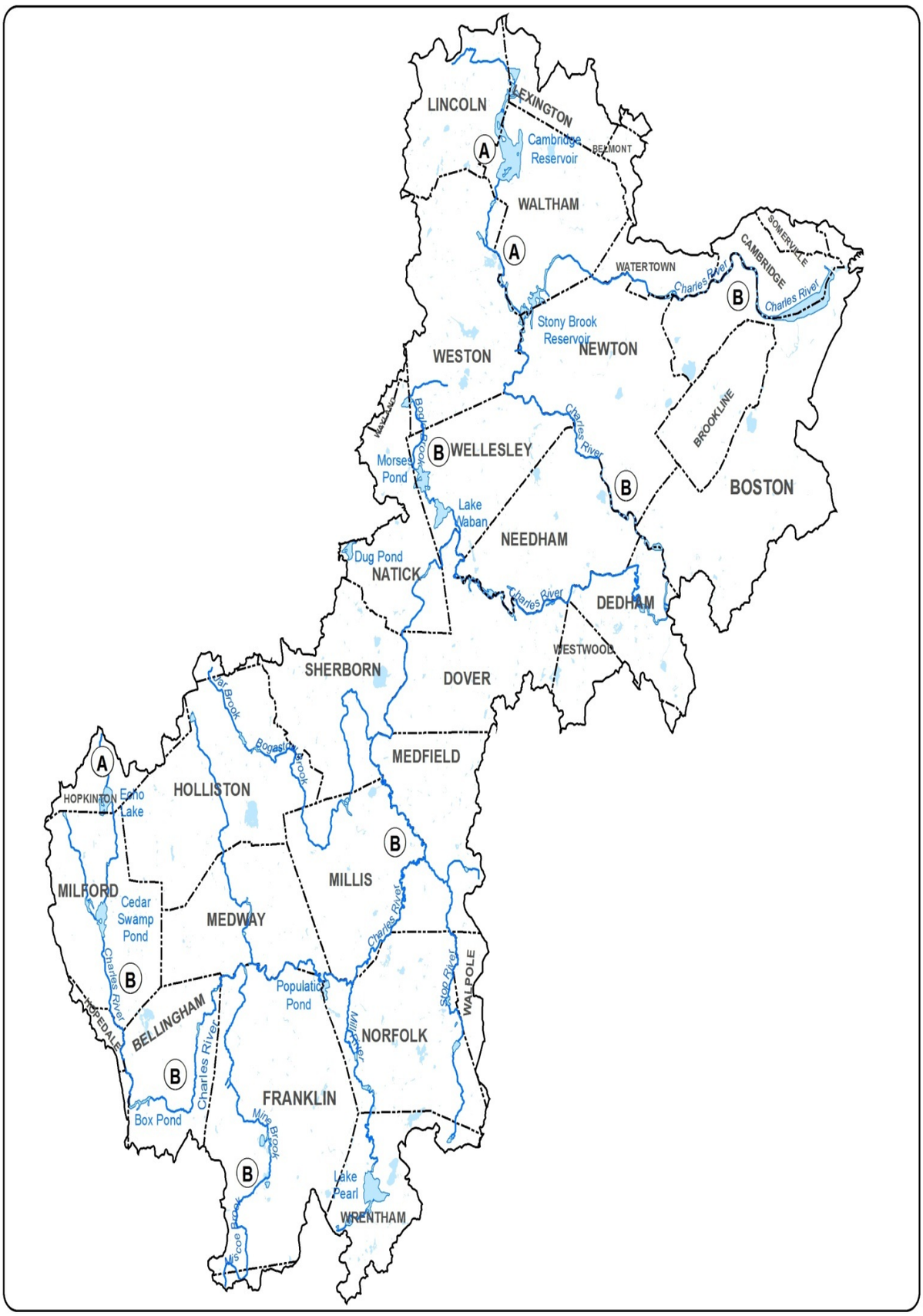
* Acronyms:
ACEC = Area of Critical Environmental Concern
ORW = Outstanding Resource Water
PWS = Public Water Supply

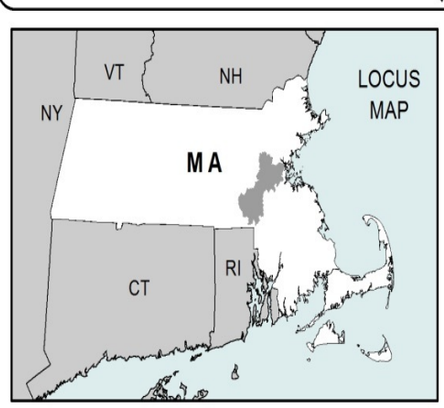
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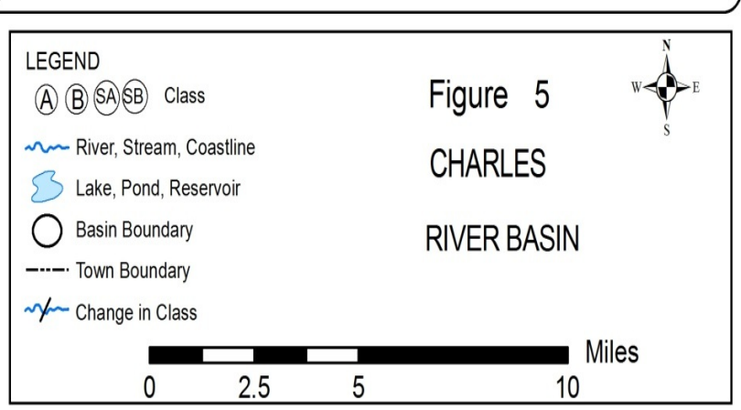
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[1] Coastal and marine waters Class SA; fresh waters Class B.
[2] Shellfishing applies to marine and coastal waters only; warm water applies to fresh waters only.
[3] Note that all or a portion of this surface water is within the Sandy Neck Barrier Beach System ACEC.
[4] Note that all or a portion of this surface water is within the Inner Cape Cod Bay ACEC.
[5] Note that all or a portion of this surface water is within the Pleasant Bay ACEC.
[6] Note that all or a portion of this surface water is within the Waquoit Bay ACEC.

4.06: continued







4.06: continued

TABLE 5
CHARLES RIVER BASIN*

Surface Water Name†	Surface Water or Segment Boundary	Mile Point‡	Class	Qualifiers
Charles River	Source in Hopkington to Dilla Street, Milford and those tributaries thereto	78.2 - 75.8	A	PWS ORW
	From Milford POTW discharge, Milford, to outlet of Populatic Pond, Medway/Norfolk	72.7 - 58.2	B	Warm Water
	From outlet of Populatic Pond, Medway/Norfolk, to South Natick Dam, Watertown	58.2 - 40.3	B	Warm Water
	From South Natick Dam, Natick, to Watertown Dam, Watertown	40.3 - 9.1	B	Warm Water
	From Watertown Dam, Watertown, to BU Bridge, Cambridge	9.1 - 3.0	B	Warm Water CSO[1]
	From BU Bridge, Cambridge, to its mouth at the New Charles River Dam (inclusive of Charles River Basin), Chelsea/Boston	3.0 - 0.0	B	Warm Water CSO[2]
Muddy River	Entire length, Boston	2.7 - 0.0	B(CSO)	Warm Water
Mine Brook	Source to former Franklin POTW discharge, Franklin	7.2 - 4.0	B	Warm Water High Quality Water
	From former Franklin POTW discharge, Franklin to confluence with the Charles River, Franklin	4.0 - 0.0	B	Warm Water
Unnamed tributary (Sugar Brook)	Source in Millis to confluence with the Charles River, Millis		B	Warm Water High Quality Water
Stony Brook Reservoir (Turtle Pond)	Entire reservoir to outlet in Weston/Waltham and those tributaries thereto		A	PWS ORW
Cambridge Reservoir (Hobbs Brook Upper and Lower Reservoirs)	Entire reservoir to outlet in Waltham and those tributaries thereto (this reservoir is a "feeder" to Fresh Pond, Cambridge)		A	PWS ORW
Sandy Pond (Flint's Pond)	Entire pond to outlet in Lincoln and those tributaries thereto		A	PWS ORW
Echo Lake	Entire lake to outlet in Hopkinton and those tributaries thereto		A	PWS ORW

4.06: continued

TABLE 5 CHARLES RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Louisa Lake	Entire lake to outlet in Milford and those tributaries thereto		A	PWS ORW
Shepards Brook	Source in Franklin to confluence with Charles River, Franklin		B	Cold Water

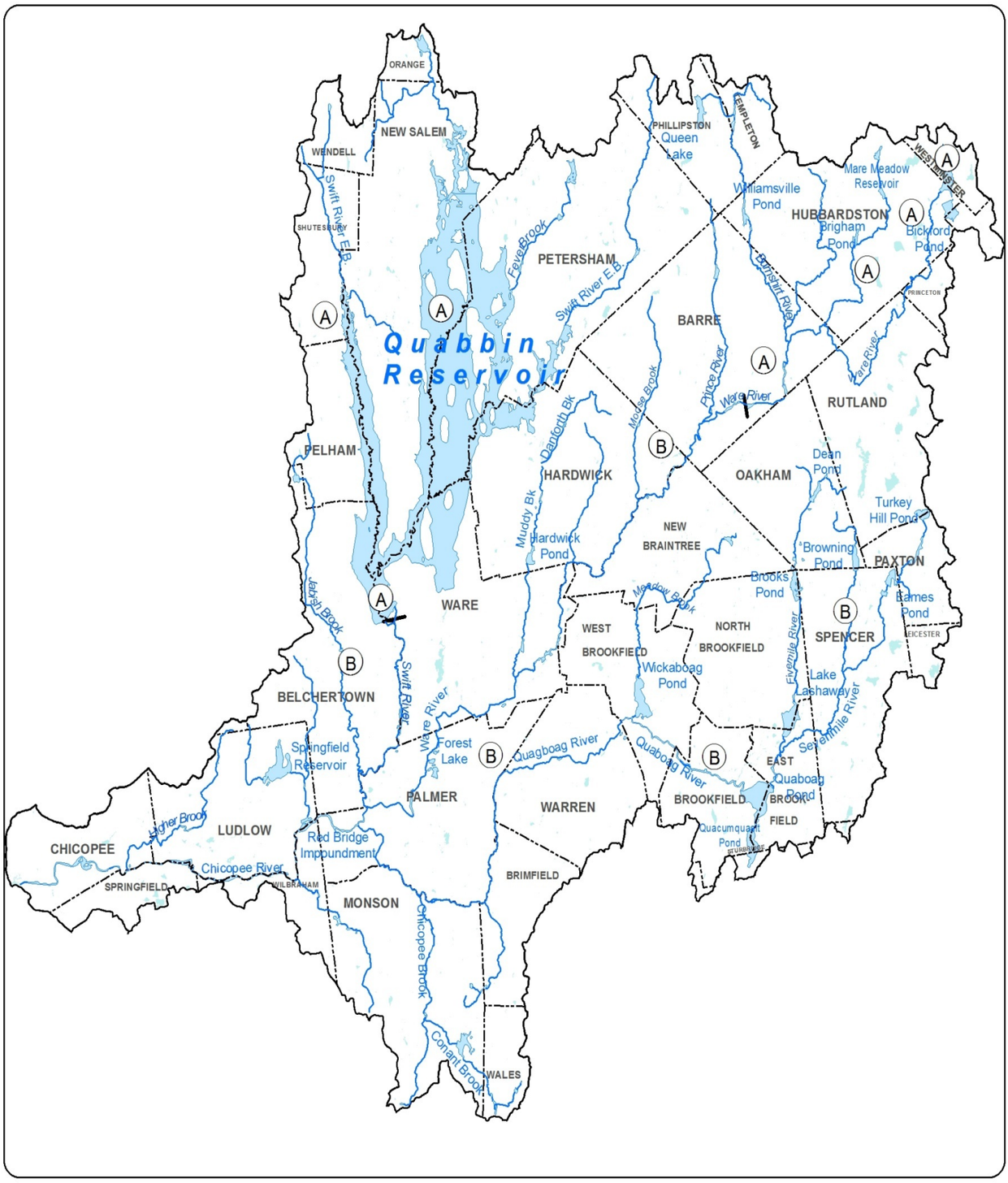
* Acronyms:
CSO = Combined Sewer Overflow
ORW = Outstanding Resource Water
PWS = Public Water Supply

† Names cited in parentheses are unofficial, locally-used names.

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

[1] Discharges from the City of Cambridge's CSOs within this segment are subject to a variance titled, 'Final Determination to Adopt a Water Quality Standards Variance for Combined Sewer Overflow Discharges to Lower Charles River/Charles Basin', effective through 8-31-2029. This variance is available on MassDEP's website.
[2] Discharges from the Massachusetts Water Resources Authority's and the City of Cambridge's CSOs within this segment are subject to the variance described in footnote 1 above.

4.06: continued



4.06: continued

TABLE 6 CHICOPEE RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Ware River	Source in Barre to MDC intake, Barre and those tributaries thereto	34.0 - 29.1	A	PWS ORW
	From MDC intake, Barre, to dam at South Barre	29.1 - 27.3	B	Cold Water High Quality Water
	From dam at South Barre to confluence with Quaboag River, Palmer	27.3 - 0.0	B	Warm Water
Prince River	Source in Barre to confluence with the Ware River, Barre		B	Cold Water High Quality Water
Swift River	From Winsor Dam, Ware/Belchertown, to confluence with Ware River, Palmer	9.8 - 0.0	B	Cold Water
Sevenmile River	Source in Spencer to confluence with Cranberry River, Spencer	8.6 - 2.4	B	Warm Water High Quality Water
	From confluence with Cranberry River, Spencer to confluence with East Brookfield River, East Brookfield	2.4 - 0.0	B	Warm Water
East Brookfield River	Entire length, East Brookfield	2.2 - 0.0	B	Warm Water
Quaboag River	Source in Brookfield to Rt. 67, West Brookfield	24.9 - 19.2	B	Warm Water
	Rt. 67, West Brookfield, to Warren POTW discharge, Warren	19.2 - 13.1	B	Warm Water
	From Warren POTW discharge, Warren to confluence with Ware River, Palmer	13.1 - 0.0	B	Warm Water
Forget-Me-Not Brook	Source in North Brookfield to North Brookfield POTW discharge, North Brookfield		B	Cold Water High Quality Water
	From North Brookfield POTW discharge, North Brookfield, to confluence with Dunn Brook, East Brookfield		B	Warm Water
Dunn Brook	From confluence with Forget-Me-Not, East Brookfield Brook to confluence with the Quaboag River, Brookfield	2.4 - 0.0	B	Warm Water
Chicopee Brook	Entire length, Monson		B	Cold Water

4.06: continued

TABLE 6 CHICOPEE RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Chicopee River	Confluence of Ware and Quaboag Rivers, Palmer, to confluence with the Connecticut River, Chicopee	17.9 - 0.0	B	Warm Water CSO
Lake Mattawa (North Pond Brook Reservoir)	Entire lake to outlet in Orange and those tributaries thereto		A	PWS ORW
Allen Hill Reservoir (Barre Town Reservoir)	Entire reservoir to outlet in Barre and those tributaries thereto		A	PWS ORW
Ludlow Reservoir (Springfield Reservoir)	Entire reservoir to outlet in Ludlow and those tributaries thereto		A	PWS ORW
Doane Pond	Entire pond to outlet in North Brookfield and those tributaries thereto		A	PWS ORW
Horse Pond (North Pond)	Entire pond and those tributaries thereto		A	PWS ORW
Palmer Reservoir (Graves Brook Upper Reservoir)	Entire reservoir to outlet in Palmer and those tributaries thereto		A	PWS ORW
Shaw Pond	Entire pond to outlet in Leicester and those tributaries thereto		A	PWS ORW
Mare Meadow Reservoir	Entire reservoir to outlet in Hubbardston and those tributaries thereto		A	PWS ORW
Bickford Pond	Entire pond to outlet in Hubbardston and those tributaries thereto		A	PWS ORW
Palmer Reservoir (Unnamed Reservoir, Graves Brook Lower Reservoir, Palmer Lower Reservoir)	Entire reservoir to outlet in Palmer and those tributaries thereto		A	PWS ORW
Quabbin Reservoir	Entire reservoir to outlet in Ware and those tributaries thereto		A	PWS ORW
Bradish Brook	Source in West Brookfield to inlet of Wickaboag Pond, West Brookfield		B	Cold Water
Cadwell Brook	Source in Wilbraham to confluence with Twelvemile Brook, Wilbraham		B	Cold Water
Cadwell Creek	Source in Pelham to inlet of Quabbin Reservoir, Belchertown		A	Cold Water PWS ORW

4.06: continued

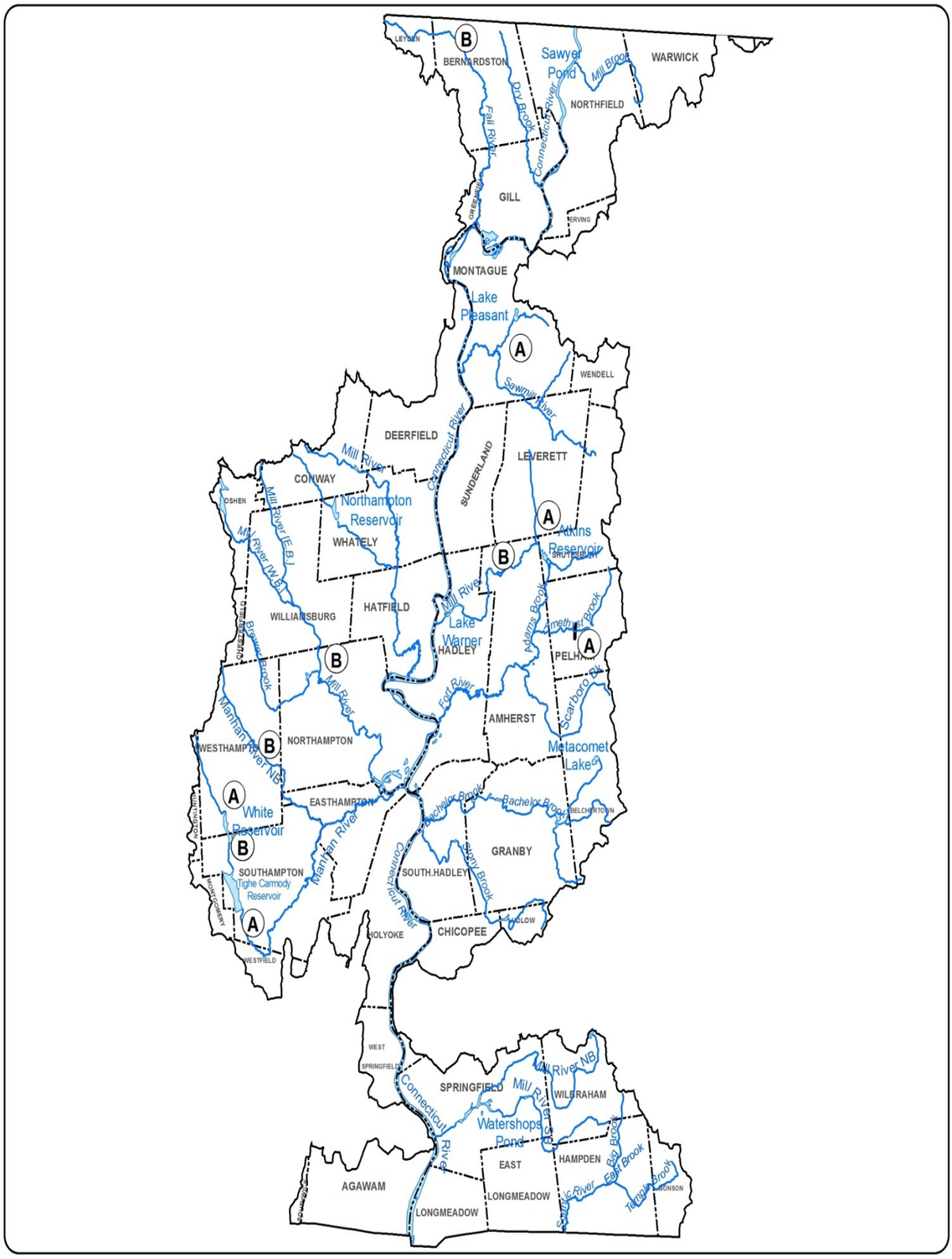
TABLE 6 CHICOPEE RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Camel Brook	Source in Shutesbury to confluence with West Branch Swift River, Shutesbury		A	Cold Water PWS ORW
Cobb Brook	Source in Shutesbury to inlet of Quabbin Reservoir, Shutesbury		A	Cold Water PWS ORW
Pinnacle Creek	Source in Monson to confluence with Twelvemile Brook, Monson		B	Cold Water
Popple Camp Brook	Source in Phillipston to confluence with East Branch Swift River, Phillipston		A	Cold Water PWS ORW
Rocky Run	Source in Shutesbury to confluence with West Branch Swift River, Shutesbury		A	Cold Water PWS ORW
Smith Brook	Source in Barre to confluence with Prince River, Barre		B	Cold Water
Turkey Brook	Source in Brimfield to confluence with Penny Brook, Brimfield		B	Cold Water
Underhill Brook	Source in New Salem to inlet of Quabbin Reservoir, New Salem		A	Cold Water PWS ORW

* Acronyms:
CSO = Combined Sewer Overflow
MDC = Massachusetts District Commission
ORW = Outstanding Resource Water
PWS = Public Water Supply

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‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued



4.06: continued

TABLE 7 CONNECTICUT RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Connecticut River	From MA-NH-VT state line, Northfield, to Turner's Falls Dam, Gill	138.2 - 123.4	B	Warm Water
	From Turner's Falls Dam, Gill, to Holyoke Dam, Holyoke/South Hadley	123.4 - 85.7	B	Warm Water CSO
	Holyoke Dam, Holyoke/South Hadley, to MA-CT state line, Longmeadow/Agawam	85.7 - 69.8	B	Warm Water CSO
Lampson Brook	From the Belchertown POTW discharge to confluence with Weston Brook	1.1 - 0.0	B	Warm Water
Weston Brook	From confluence with Lampson Brook to inlet of Forge Pond (through which Bachelor Brook flows)	1.4 - 0.0	B	Warm Water
Bachelor Brook	From the inlet of Weston Brook to Forge Pond (through which Bachelor Brook flows) to the confluence with the Connecticut River	11.3 - 0.0	B	Warm Water
Atkins Reservoir	Entire reservoir to outlet in Shutesbury and those tributaries thereto		A	PWS ORW
Unnamed reservoir (Amethyst Brook, Hawley/Hill PWS Intake)	Entire reservoir to outlet in Pelham and tributaries thereto		A	PWS ORW
Hawley Reservoir	Entire reservoir to outlet in Pelham and those tributaries thereto		A	PWS ORW
Hill Reservoir	Entire reservoir to outlet in Pelham and those tributaries thereto		A	PWS ORW
Unnamed Reservoir (Running Gutter Brook Reservoir, Hatfield Reservoir)	Entire reservoir to outlet in Hatfield and those tributaries thereto		A	PWS ORW
White Reservoir	Entire reservoir to outlet in Southampton and those tributaries thereto		A	PWS ORW
Tighe Carmody Reservoir (Manhan Reservoir)	Entire reservoir to outlet in Southampton and those tributaries thereto		A	PWS ORW
Whiting Street Reservoir	Entire reservoir to outlet in Holyoke and those tributaries thereto		A	PWS ORW
Green Pond	Entire pond to outlet in Montague and those tributaries thereto		A	PWS ORW
Lake Pleasant	Entire lake to outlet in Montague and those tributaries thereto		A	PWS ORW

4.06: continued

TABLE 7 CONNECTICUT RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Roberts Meadow Reservoir	Entire reservoir to outlet in Northampton and those tributaries thereto		A	PWS ORW
Mountain Street Reservoir	Entire reservoir to outlet in Williamsburg and those tributaries thereto		A	PWS ORW
Unnamed Reservoir (Northampton Reservoir [New], Ryans Reservoir)	Entire reservoir to outlet in Whately and those tributaries thereto		A	PWS ORW
West Whately Reservoir (Northampton Reservoir [Old])	Entire reservoir to outlet in Whately and those tributaries thereto		A	PWS ORW
Unnamed Reservoir (Louisiana Brook Reservoir, Grandin Reservoir, Upper Reservoir)	Entire reservoir to outlet in Northfield and those tributaries thereto		A	PWS ORW
Lithia Springs Reservoir	Entire reservoir to outlet in South Hadley and those tributaries thereto		A	PWS-Abandoned ORW
Unquomonk Brook Reservoir	Entire reservoir to outlet in Williamsburg and those tributaries thereto		A	PWS - Abandoned ORW
Unnamed Reservoir (Roaring Brook Reservoir)	Entire reservoir to outlet in Conway and those tributaries thereto		A	PWS ORW
Conway Reservoir	Entire reservoir in Conway and those tributaries thereto		A	PWS ORW
Mill River	From Walnut Street Bridge, Springfield, to confluence with the Connecticut River, Springfield		B	CSO
Adams Brook	Source in Shutesbury to confluence with Fort River, Amherst		B	Cold Water
Bradford Brook	Source to confluence with East Branch Mill River, Williamsburg		B	Cold Water
Broad Brook	Entire length, from source in Holyoke to the inlet of Nashawannuck Pond, Easthampton		B	Cold Water
Buffam Brook (Buffum Brook)	Entire length, Shutesbury/Pelham		B	Cold Water

4.06: continued

TABLE 7 CONNECTICUT RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Couch Brook	Source in Leyden to confluence with Fall River, Bernardston		B	Cold Water
Day Brook	Source in Williamsburg to confluence with unnamed tributary to the Mill River, Northampton (such unnamed tributary flowing from the confluence of Roberts Meadow and Clark brooks, Northampton, to the Mill River, Northampton)		B	Cold Water
Dean Brook	Entire length, Shutesbury		A	Cold Water PWS ORW
Dry Brook	Source in Bernardston to confluence with Connecticut River, Gill		B	Cold Water
Esther Brook	Source in Whately to confluence with Mill River, Whately		B	Cold Water
Fall River	From the MA-VT state line, Bernardston, to confluence with the Connecticut River, Greenfield		B	Cold Water
Fourmile Brook	Entire length, Northfield		B	Cold Water
Gates Brook	Entire length, Pelham		B	Cold Water
Grass Hill Brook	Source in Whately to confluence with Beaver Brook, Williamsburg		B	Cold Water
Goddard Brook	Source in Montague to confluence with Sawmill River, Montague		B	Cold Water
Hearthstone Brook	Source in Pelham to confluence with Adams Brook, Amherst		B	Cold Water
Hannigan Brook	Source in Montague to inlet of Lake Pleasant, Montague		A	Cold Water PWS ORW
Harris Brook	Source in Pelham to the outlet of Intake Reservoir Dam, Pelham (inclusive of the Hawley Reservoir and the Amethyst Brook Hawley/Hill PWS Intake, also listed separately)		A	Cold Water PWS ORW
	From the outlet of Intake Reservoir Dam, Pelham to confluence with Amethyst Brook, Pelham		B	Cold Water
Joe Wright Brook	Entire length, Williamsburg		B	Cold Water
Manhan River, North Branch	Source in Chesterfield to confluence with the Manhan River, Easthampton		B	Cold Water

4.06: continued

TABLE 7 CONNECTICUT RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Meekin Brook	Source in Chesterfield to confluence with West Branch Mill River, Williamsburg		B	Cold Water
Mill Brook	Entire length (from the outlet of Stevens Swamp Dam, Warwick, to confluence with the Connecticut River, Northfield)		B	Cold Water
Mill River, East Branch	Source in Williamsburg to confluence with the Mill River, Williamsburg		B	Cold Water
Mill River, West Branch	From East St., Goshen, to confluence with Meekin Brook, Williamsburg		B	Cold Water
Millers Brook	Source in Northfield to confluence with Connecticut River, Northfield		B	Cold Water
Mohawk Brook	Source in Sunderland to confluence with Connecticut River, Hadley		B	Cold Water
Moose Brook	Entire length, Southampton		B	Cold Water
Mountain Brook	Source in Leverett to confluence with Doolittle Brook, Leverett		B	Cold Water
Nurse Brook	Entire length, Shutesbury		A	Cold Water PWS ORW
Spaulding Brook	Source in Montague to confluence with Sawmill River, Montague		B	Cold Water
Red Brook	Source in Wendell to confluence with Sawmill River, Leverett		B	Cold Water
Rice Brook	Entire length, Westhampton		B	Cold Water
Roaring Brook	Source in Conway to South Deerfield Water Supply Dam, Whately		A	Cold Water PWS ORW
	From South Deerfield Water Supply Dam, Whately, to confluence with Mill River, Whately		B	Cold Water
Rogers Brook	Entire length, Goshen		B	Cold Water
Sacket Brook	Entire length, Montgomery		B	Cold Water
Sawmill River	From Dudleyville Road, Leverett, to confluence with the Connecticut River, Montague		B	Cold Water
Scarboro Brook	Entire length, Belchertown		B	Cold Water
Schneelock Brook	Entire length, Springfield		B	Cold Water
Schoolhouse Brook	Entire length, West Springfield/Holyoke		B	Cold Water

4.06: continued

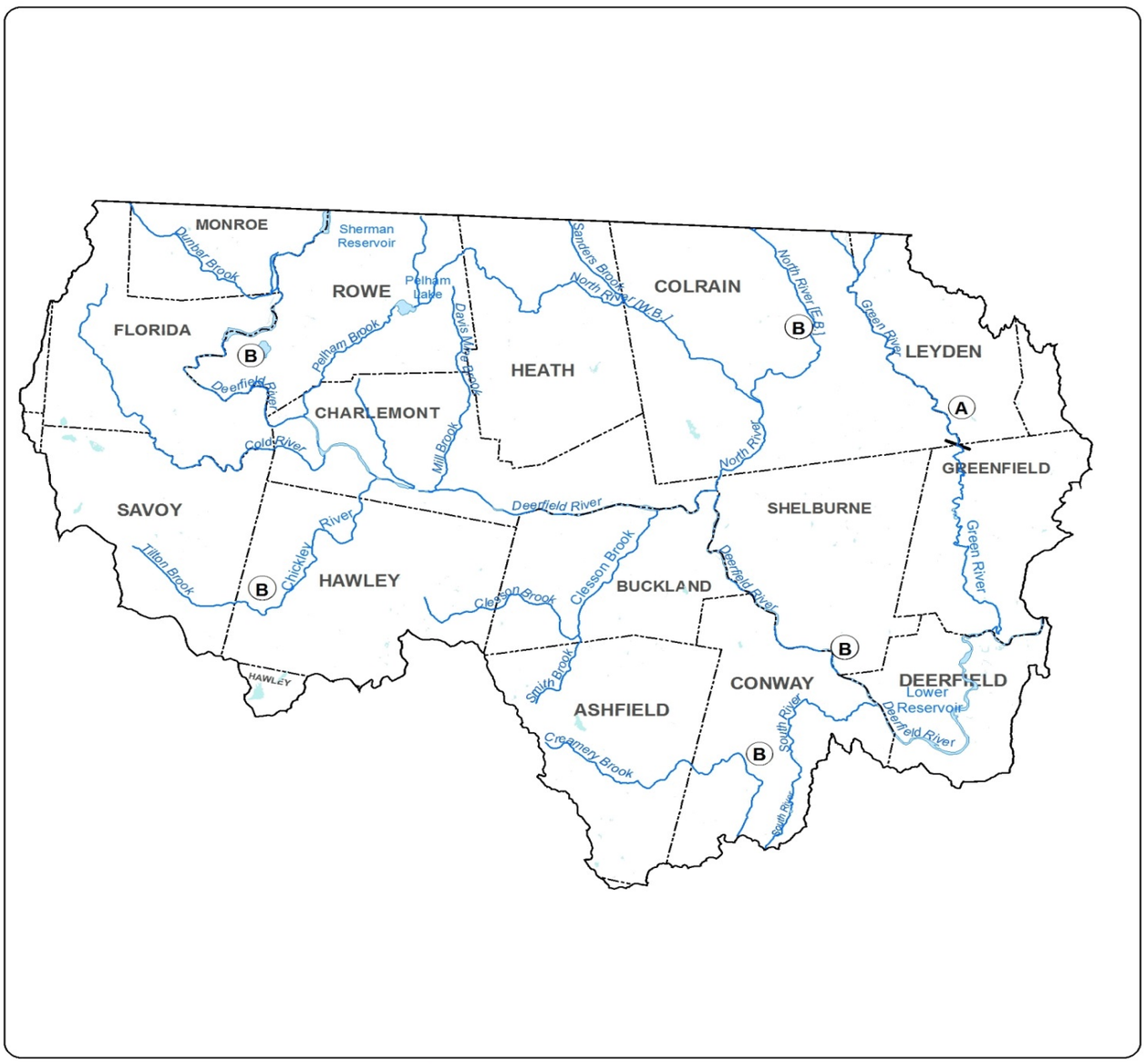
TABLE 7 CONNECTICUT RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Shattuck Brook	Entire length, Leyden/Bernardston		B	Cold Water
Sodom Brook	Entire length, Westhampton		B	Cold Water
Tripple Brook	Entire length, Southampton		B	Cold Water
West Brook	Entire length (from the outlet of West Whately Reservoir Dam, Whately, to confluence with the Mill River, Hatfield)		B	Cold Water
Williams Brook	Source in Wendell to confluence with Sawmill River, Leverett		B	Cold Water

* Acronyms:
CSO = Combined Sewer Overflow
ORW = Outstanding Resource Water
PWS = Public Water Supply

† Names cited in parentheses are unofficial, locally-used names.

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued



4.06: continued

TABLE 8
DEERFIELD RIVER BASIN*

Surface Water Name†	Surface Water or Segment Boundary	Mile Point‡	Class	Qualifiers
Deerfield River	From the MA-VT state line, Monroe/Rowe, to confluence with the North River, Charlemont	42.9 - 18.2	B	Cold Water
	From confluence with the North River, Charlemont, to confluence with the Connecticut River, Greenfield/Deerfield	18.2 - 0.0	B	Warm Water
West Branch North River	From source in Heath to confluence with the North River, Colrain		B	Cold Water High Quality Water
East Branch North River	From the MA-VT state line, Colrain, to confluence with the North River, Colrain		B	Cold Water High Quality Water
North River	From confluence of East and West Branches of the North River, Colrain, to the treatment works discharge, Colrain, located approximately 0.3 river miles south of the Adamsville Road and Route 112 intersection	3.1 - 2.7	B	Cold Water High Quality Water
	From the treatment works discharge, Colrain, located approximately 0.3 river miles south of the Adamsville Road and Route 112 intersection, to confluence with the Deerfield River, Charlemont/Shelburne/Buckland	2.7 - 0.0	B	Cold Water
Green River	From the MA-VT state line, Colrain to Green River water supply intake, Greenfield and tributaries thereto	14.5 - 8.4	A	Cold Water PWS High Quality Water ORW
	From Green River water supply intake, Greenfield to the Greenfield POTW's former discharge, Greenfield	8.4 - 0.6	B	Cold Water High Quality Water
	From the Greenfield POTW's former discharge to confluence with the Deerfield River	0.6 - 0.0	B	Cold Water
Highland Springs Reservoir (Upper Reservoir)	Entire reservoir to outlet in Ashfield and those tributaries thereto		A	PWS ORW

4.06: continued

TABLE 8 DEERFIELD RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Unnamed Reservoir (Mountain Spring Reservoir or Mountain Brook Reservoir)	Entire reservoir to outlet in Colrain and those tributaries thereto		A	PWS ORW
Greenfield Reservoir (Leyden Glen Reservoir, Glen Brook Upper Reservoir)	Entire reservoir to outlet in Leyden and those tributaries thereto		A	PWS ORW
Fox Brook Reservoir	Entire reservoir to outlet in Colrain and those tributaries thereto		A	PWS ORW
Phelps Brook Reservoir	Entire reservoir to outlet in Monroe and those tributaries thereto		A	PWS ORW
Albee Brook	Entire length, Hawley/Charlemont		B	Cold Water
Avery Brook	Entire length, Heath/Charlemont		B	Cold Water
Bear River	Entire length, Ashfield/Conway		B	Cold Water
Bear Swamp Outflow	Entire length, Rowe		B	Cold Water
Black Brook	Entire length, Savoy		B	Cold Water
Bozrah Brook	Entire length, Hawley/Charlemont		B	Cold Water
Brown Brook	Source in Savoy to confluence with Chickley River, Savoy		B	Cold Water
Burrington Brook	Source in Heath to confluence with West Branch Brook, Heath		B	Cold Water
Cary Brook	Source in Colrain to confluence with West Branch North River, Colrain		B	Cold Water
Cascade Brook	Source in Florida to confluence with Deerfield River, Florida		B	Cold Water
Chapel Brook	Entire length, Ashfield/Conway		B	Cold Water
Chickley River	Entire length (from source in Savoy to confluence with the Deerfield River, Charlemont)		B	Cold Water
Clesson Brook	Source in Hawley to confluence with Deerfield River, Buckland		B	Cold Water
Cold River	Entire length (from source in Florida to confluence with the Deerfield River, Charlemont)		B	Cold Water
Cooley Brook	Source in Hawley to confluence with Clesson Brook, Buckland		B	Cold Water

4.06: continued

TABLE 8 DEERFIELD RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Creamery Brook	Entire length, Ashfield		B	Cold Water
Dickenson Brook	Source in Heath to confluence with West Branch Brook, Heath		B	Cold Water
Drakes Brook	Entire length (from source in Buckland to confluence with Bear River, Conway)		B	Cold Water
Dunbar Brook	From the MA-VT state line, Florida, to confluence with the Deerfield River, Monroe		B	Cold Water
Fife Brook	Entire length, Monroe/Florida		B	Cold Water
First Brook	Entire length, Buckland		B	Cold Water
Foundry Brook	Source in Colrain to confluence with East Branch North River, Colrain		B	Cold Water
Fuller Brook	Source in Hawley to confluence with Chickley River, Hawley		B	Cold Water
Hartwell Brook	Source in Charlemont to confluence with Deerfield River, Charlemont		B	Cold Water
Hawkes Brook	Entire length, Shelburne		B	Cold Water
Hinsdale Brook	From source in Colrain to confluence with Punch Brook, Greenfield		B	Cold Water
Houghton Brook	Source in Colrain to confluence with North River, Colrain		B	Cold Water
Hunt Brook	Source in Florida to confluence with Fife Brook, Florida		B	Cold Water
Johnny Bean Brook	Source in Conway to confluence with South River, Conway		B	Cold Water
Kinsman Brook	Entire length, Heath		B	Cold Water
Manning Brook	Source in Florida to confluence with Cold River, Florida		B	Cold Water
Mccard Brook	Source in Leyden to confluence with Mill Brook, Greenfield		B	Cold Water
Mill Brook (2)	Entire length, Heath/Charlemont		B	Cold Water
Mill Brook (3)	Entire length, Hawley		B	Cold Water
Miller Brook	Source in Colrain to confluence with Borden Brook, Colrain		A	Cold Water PWS ORW
Maxwell Brook	Entire length, Rowe/Charlemont		B	Cold Water
North Brook	Entire length, Hawley		B	Cold Water

4.06: continued

TABLE 8 DEERFIELD RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Nye Brook	Source in Conway to confluence with Poland Brook, Conway		B	Cold Water
Pelham Brook	Entire length, Rowe/Charlemont		B	Cold Water
Poland Brook	Entire length, Conway		B	Cold Water
Reed Brook	Entire length, Florida		B	Cold Water
Rice Brook	Entire length, Rowe/Charlemont		B	Cold Water
Ruddock Brook	Source in Hawley to confluence with Clesson Brook, Buckland		B	Cold Water
Second Brook	Entire length, Buckland		B	Cold Water
Sheldon Brook	Source in Shelburne to confluence with Deerfield River, Deerfield		B	Cold Water
Smead Brook	Source in Greenfield to confluence with Wheeler Brook, Greenfield		B	Cold Water
Smith Brook	Source in Florida to confluence with the Deerfield River (inlet to Lower Reservoir), Florida		B	Cold Water
South River	Source to confluence with Johnny Bean Brook		B	Cold Water
Stewart Brook	Source in Colrain to confluence with Hinsdale Brook, Shelburne		B	Cold Water
Tannery Brook	Entire length, Savoy		B	Cold Water
Taylor Brook	Entire length, Rowe		B	Cold Water
Third Brook	Entire length, Buckland		B	Cold Water
Todd Brook	Entire length, Charlemont		B	Cold Water
Unnamed Stream (within Hog Hollow)	Entire length, Buckland		B	Cold Water
West Branch Brook	From the MA-VT state line, Heath, to confluence with West Branch North River, Heath		B	Cold Water
Wilder Brook	Entire length, Heath/Charlemont		B	Cold Water
Willis Brook	Entire length, Heath/Charlemont		B	Cold Water
Wheatherby Brook	Source in Hawley to confluence with Deerfield River, Charlemont		B	Cold Water
Wheeler Brook	From MA-NH state line, Rowe, to inlet of Sherman Reservoir, Rowe		B	Cold Water
Whitcomb Brook	Entire length, Florida		B	Cold Water

4.06: continued

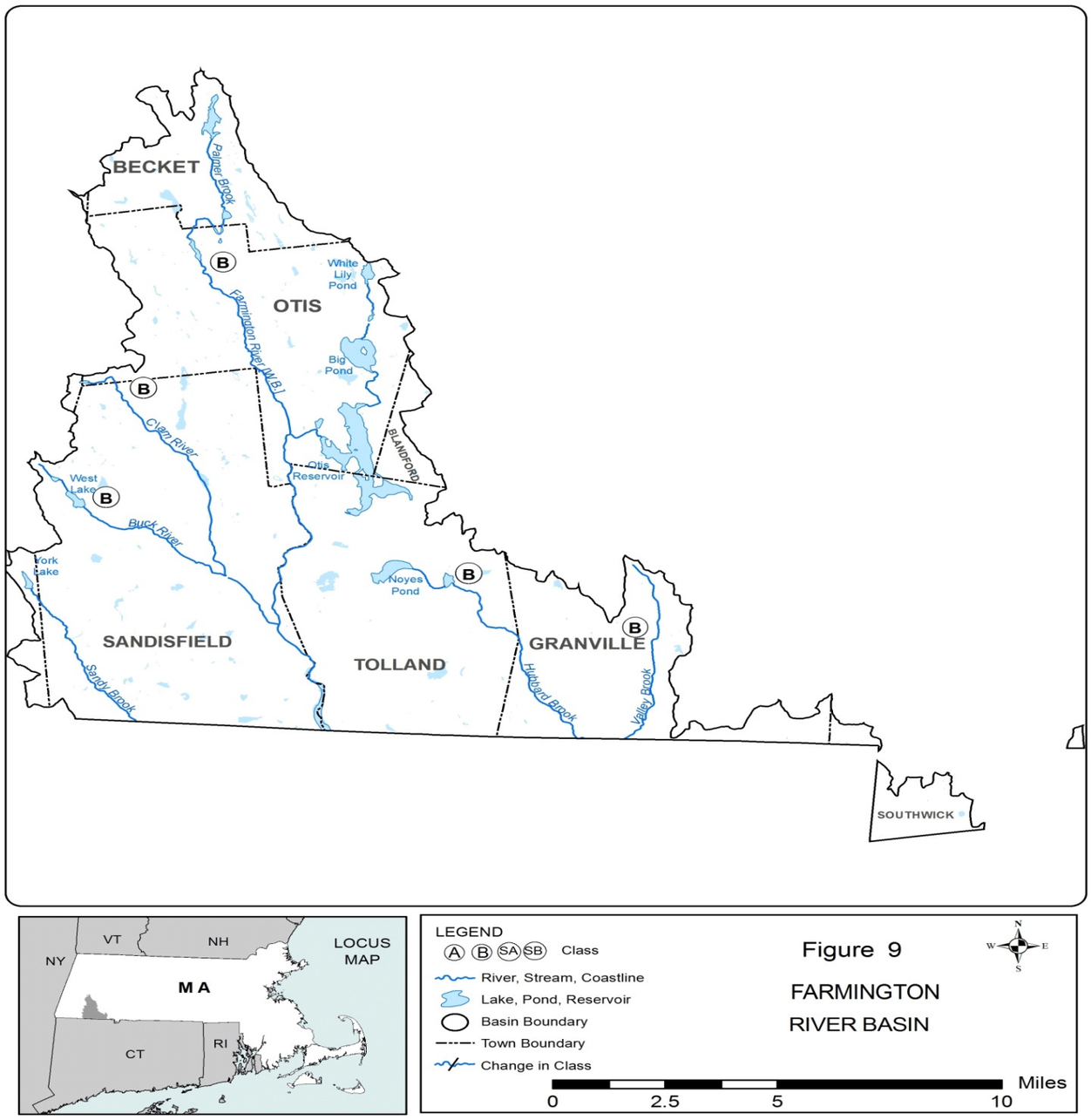
TABLE 8 DEERFIELD RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
White Brook	Source in Florida to confluence with Cold River, Florida		B	Cold Water

* Acronyms:
ORW = Outstanding Resource Water
PWS = Public Water Supply

† Names cited in parentheses are unofficial, locally-used names.

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

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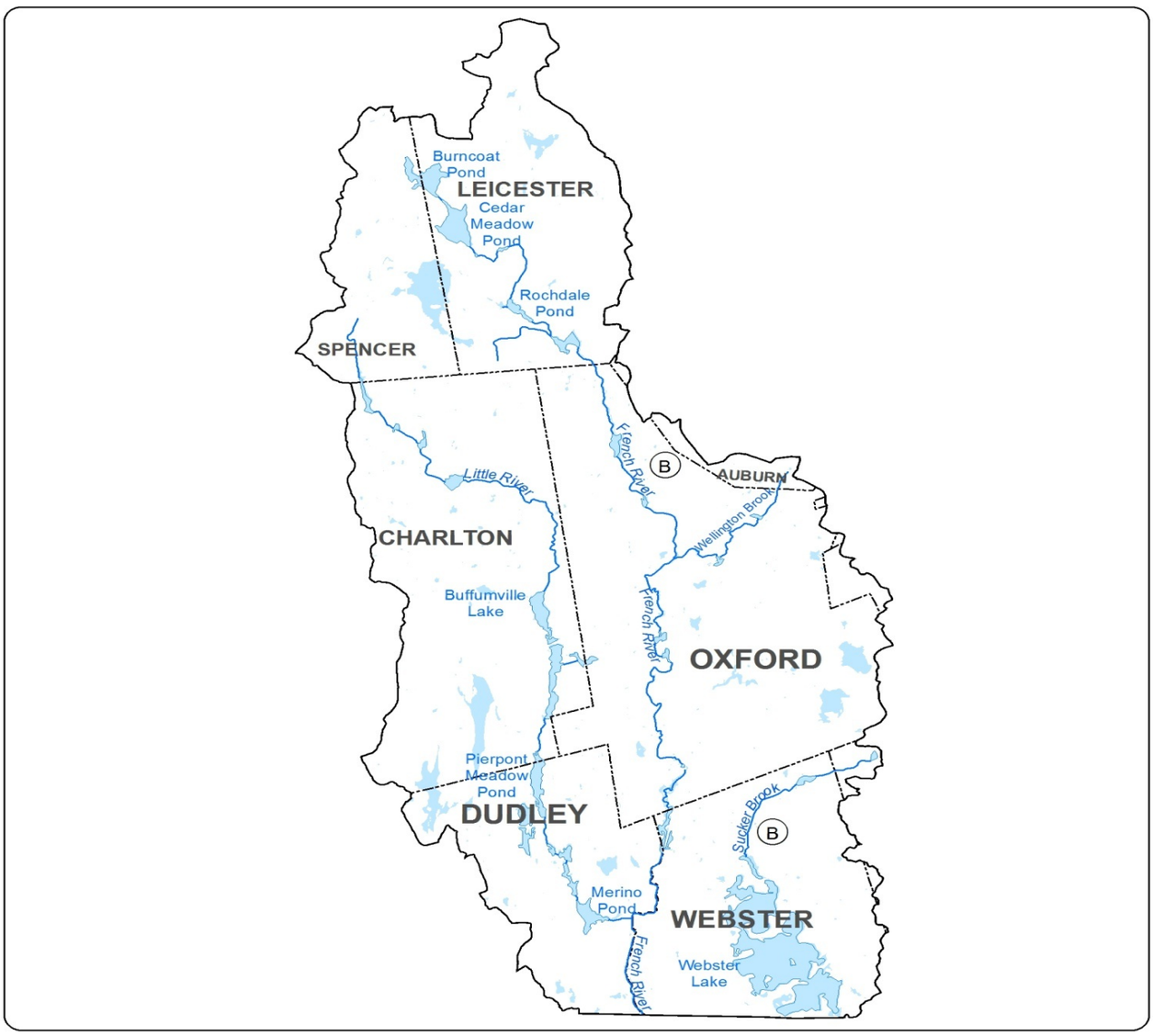


4.06: continued

TABLE 9 FARMINGTON RIVER BASIN				
Surface Water Name	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Surface waters within the Farmington River Basin	All surface waters with the exception of those that may be designated otherwise		B	Cold Water High Quality Water

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued



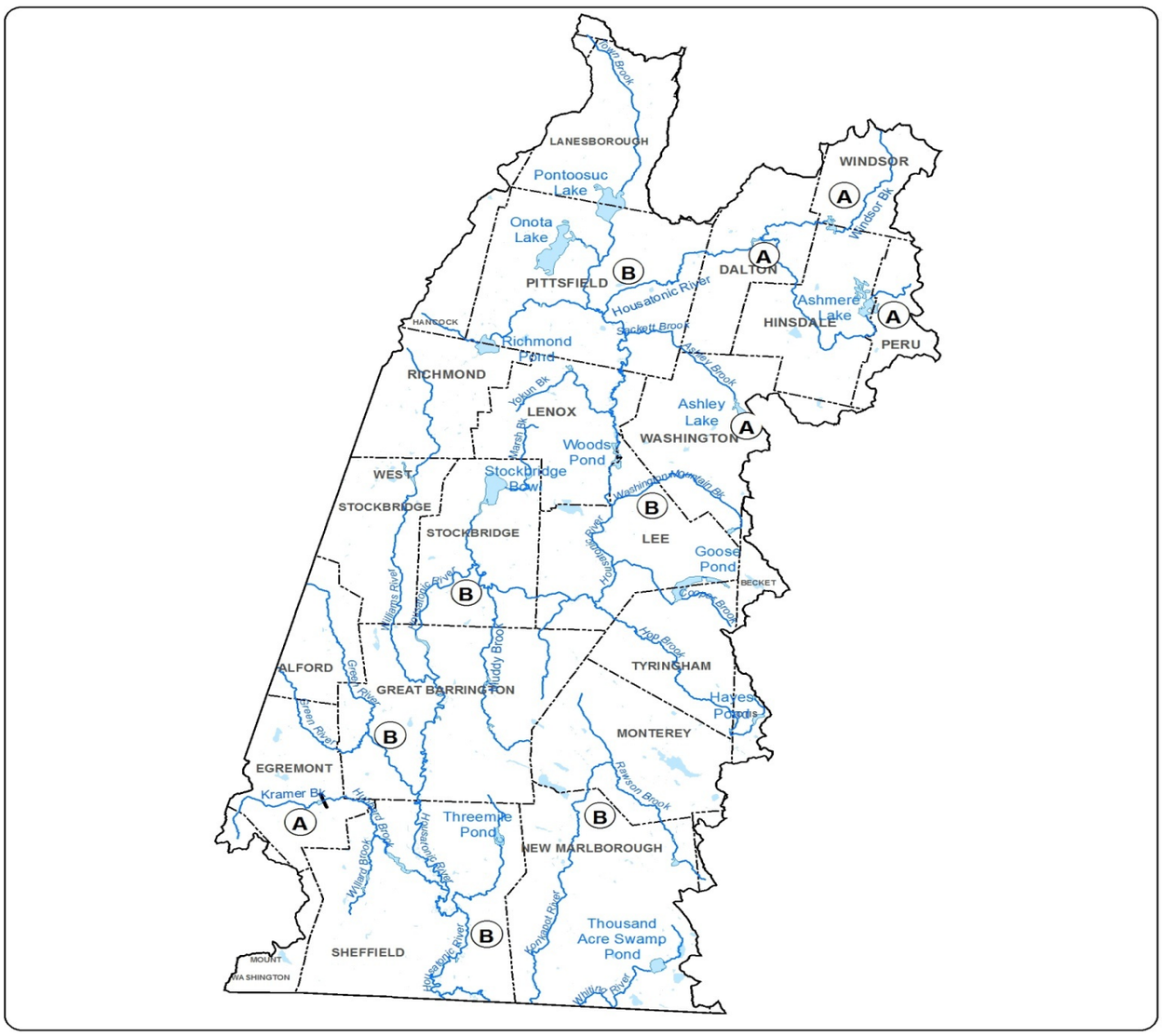
4.06: continued

TABLE 10 FRENCH RIVER BASIN*				
Surface Water Name	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
French River	From the outlet of Greenville Pond, Leicester, to the MA-CT state line, Dudley	17.8 - 0.0	B	Warm Water
Unnamed tributary to Town Meadow Brook	From the outlet of Sargent Pond to the inlet of Dutton Pond	0.5 - 0.0	B	Warm Water High Quality Water
Town Meadow Brook	From the outlet of Dutton Pond to the inlet of Greenville Pond	1.9 - 0.0	B	Warm Water
Henshaw Pond	Entire pond to outlet in Leicester and those tributaries thereto		A	PWS ORW

*Acronyms:
ORW = Outstanding Resource Water
PWS = Public Water Supply

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued



4.06: continued

TABLE 11
HOUSATONIC RIVER BASIN*

Surface Water Name†	Surface Water or Segment Boundary	Mile Point‡	Class	Qualifiers
East Branch Housatonic River	Source in Washington to outlet of Center Pond, Dalton	13.6 - 5.5	B	Cold Water High Quality Water
	From outlet of Center Pond, Dalton to confluence with the Housatonic River, Pittsfield	5.5 - 0.0	B	Warm Water
Housatonic River	From confluence of the Southwest and West Branches Housatonic River, Pittsfield, to Pittsfield POTW discharge	55.4 - 50.9	B	Warm Water
	From Pittsfield POTW discharge to the MA-CT state line, Sheffield	50.9 - 0.0	B	Warm Water
West Branch Housatonic River	Entire length, Pittsfield	36.0 - 0.0	B	Cold Water High Quality Water
Southwest Branch Housatonic River	Entire length, Pittsfield	34.1 - 0.0	B	Cold Water High Quality Water
Goose Pond Brook	Entire length, Lee/Tyringham	2.3 - 0.0	B	Cold Water High Quality Water
Williams River	Entire length, Great Barrington	10.0 - 0.0	B	Cold Water High Quality Water
Green River	Entire length, Alford/Egremont, and Great Barrington	9.5 - 0.0	B	Cold Water High Quality Water
Hubbard Brook	Entire length, Egremont and Sheffield	6.6 - 0.0	B	Cold Water High Quality Water
Fenton Brook	Entire length, Egremont	2.9 - 0.0	B	Cold Water High Quality Water

4.06: continued

TABLE 11 HOUSATONIC RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Karner Brook (includes unnamed reservoir (Karner Brook Reservoir))	Source to unnamed reservoir (Karner Brook Reservoir) PWS intake and those tributaries thereto, Mount Washington/Egremont[1]		A	PWS ORW
	From unnamed reservoir (Karner Brook Reservoir) PWS intake to the inlet of Mill Pond, Egremont[1]		B	ORW
East Mountain Reservoir	Entire reservoir to outlet in Great Barrington and those tributaries thereto		A	PWS ORW
Long Pond	Entire pond to outlet in Great Barrington and those tributaries thereto		A	PWS ORW
Belmont Reservoir	Entire reservoir to outlet in Hinsdale and those tributaries thereto		A	PWS ORW
Lower Reservoir (Codding Brook Lower Reservoir, Vanetti Reservoir)	Entire reservoir to outlet in Lee and those tributaries thereto		A	PWS ORW
Leahey Reservoir (Codding Brook Upper Reservoir)	Entire reservoir to outlet in Lee and those tributaries thereto		A	PWS ORW
Lenox Reservoir (Lower Root Reservoir)	Entire reservoir to outlet in Lenox and those tributaries thereto		A	PWS ORW
Lenox Reservoir (Upper Root Reservoir)	Entire reservoir to outlet in Lenox and those tributaries thereto		A	PWS ORW
Ashley Lake (Ashley Lake Reservoir)	Entire lake to outlet in Washington and those tributaries thereto		A	PWS ORW
Sandwash Reservoir	Entire reservoir to outlet in Washington and those tributaries thereto		A	PWS ORW
Farnham Reservoir	Entire reservoir to outlet in Washington and those tributaries thereto		A	PWS ORW
School House Lake	Entire lake to outlet in Washington and those tributaries thereto (inclusive of Washington Mountain Brook upstream of the lake)		A	PWS ORW
Cleveland Brook Reservoir (Cleveland Reservoir)	Entire reservoir to outlet in Hinsdale and those tributaries thereto		A	PWS ORW

4.06: continued

TABLE 11 HOUSATONIC RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Lake Averic (Echo Lake, Mountain Mirror Lake)	Entire lake to outlet in Stockbridge and those tributaries thereto		A	PWS ORW
Egypt Pond (Egypt Brook Reservoir)	Entire pond to outlet in Dalton and those tributaries thereto		A	PWS ORW
Windsor Reservoir (Cady Brook Reservoir)	Entire reservoir to outlet in Windsor and those tributaries thereto		A	PWS ORW
Upper Sackett Reservoir (Sackett Brook Reservoir)	Entire reservoir to outlet in Hinsdale and those tributaries thereto		A	PWS ORW
Lower Sacket Reservoir	Entire reservoir to outlet in Dalton and those tributaries thereto		A	ORW
Unnamed reservoir (Anthony Brook Reservoir)	The entire unnamed reservoir (known as Anthony Brook Reservoir) to outlet in Dalton and those tributaries thereto (inclusive of Anthony Pond)		A	Cold Water PWS ORW
	From the outlet of unnamed reservoir (Anthony Brook Reservoir), Dalton, to confluence with Wahconah Falls Brook, Dalton		B	Cold Water
Ashley Reservoir (Ashley Intake Reservoir)	Entire reservoir to outlet in Washington and those tributaries thereto		A	PWS ORW
Sandisfield Road Reservoir	Entire reservoir and those tributaries thereto		A	PWS ORW
Alford Brook	Source in West Stockbridge to confluence with Seekonk Brook, Alford		B	Cold Water
Barton Brook	Source in Dalton to confluence with East Branch Housatonic River, Pittsfield		B	Cold Water
Bear Rock Stream	Source in Mount Washington to confluence with Schenob Brook, Sheffield		B	Cold Water
Brattle Brook	Source in Dalton to confluence with East Branch Housatonic River, Pittsfield		B	Cold Water
Churchill Brook	Entire length, Lanesboro/Pittsfield		B	Cold Water
Cleveland Brook	From the outlet of Cleveland Brook Reservoir, Hinsdale, to confluence with East Branch Housatonic River, Dalton		B	Cold Water
Commons Brook	Source in Lee to confluence with Codding Brook, Lee		A	Cold Water PWS ORW

4.06: continued

TABLE 11 HOUSATONIC RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Crystal Brook	Source in Tyringham to confluence with Hop Brook, Tyringham		B	Cold Water
Dry Brook	Source in Mount Washington to confluence with Schenob Brook, Sheffield		B	Cold Water
Hathaway Brook	Source in Washington to confluence with Sackett Brook, Dalton		B	Cold Water
Muddy Brook	Source in Great Barrington to confluence with Stony Brook, Great Barrington		B	Cold Water
Race Brook	Source in Mount Washington to confluence with Dry Brook, Sheffield		B	Cold Water
Russo Brook	Source in Hinsdale to confluence with East Branch Housatonic River, Hinsdale		B	Cold Water
Swann Brook	Source in Monterey to confluence with Konkapot River, Monterey		B	Cold Water
Sykes Brook	Source in Pittsfield to confluence with Housatonic River, Pittsfield		B	Cold Water
Tom Ball Brook	Source in West Stockbridge to confluence with Alford Brook, Alford		B	Cold Water
Tyler Brook	Entire length, Windsor (Tyler Brook is a tributary to Windsor Brook which flows into Windsor Reservoir and ultimately to Cleveland Reservoir)		A	Cold Water PWS ORW
Welch Brook	Entire length, Hinsdale[2]		B	Cold Water
Weston Brook	Source in Windsor to confluence with Wahconah Falls Brook, Dalton		B	Cold Water

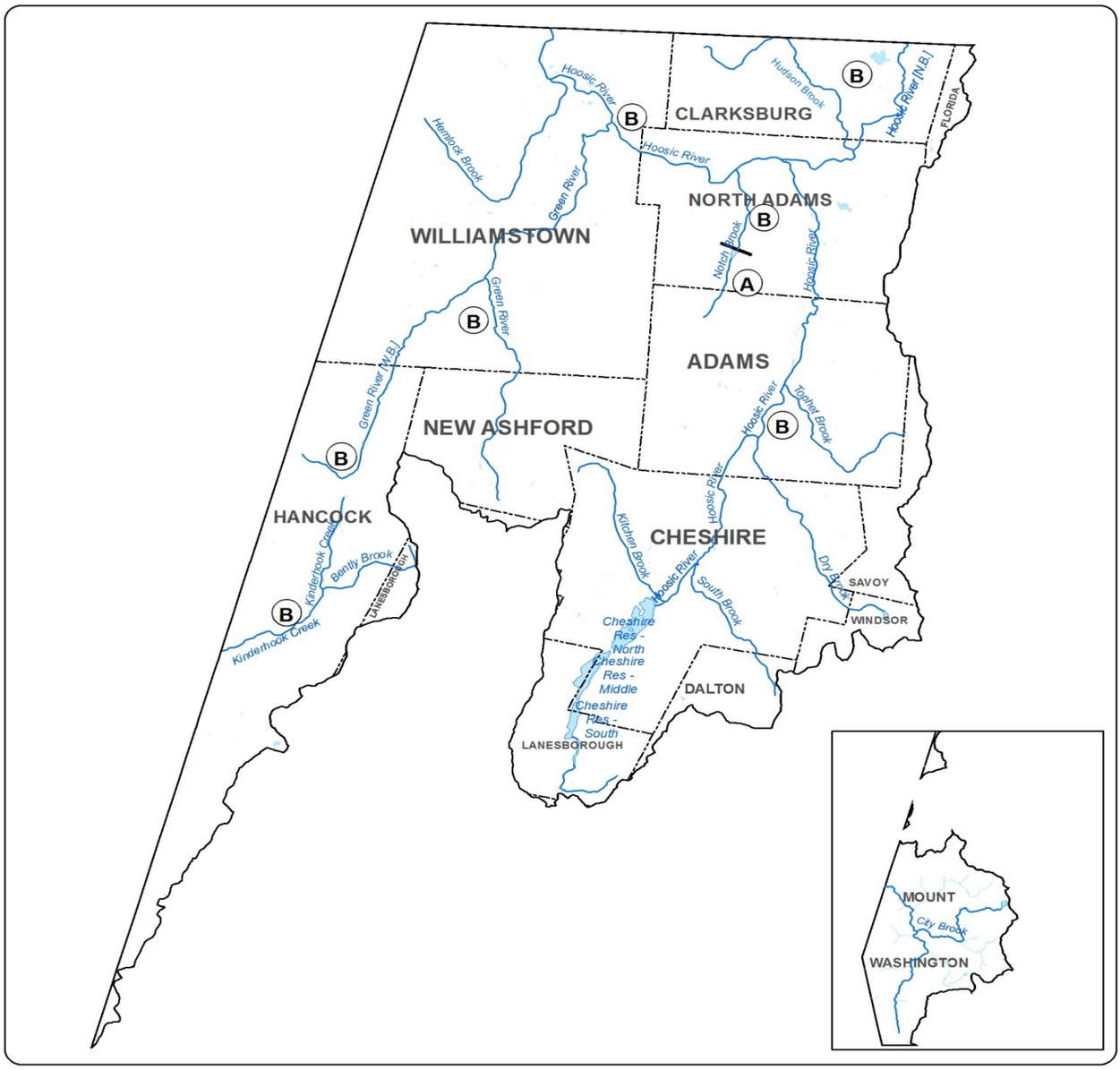
* Acronyms:
ACEC = Area of Critical Environmental Concern
ORW = Outstanding Resource Water
PWS = Public Water Supply

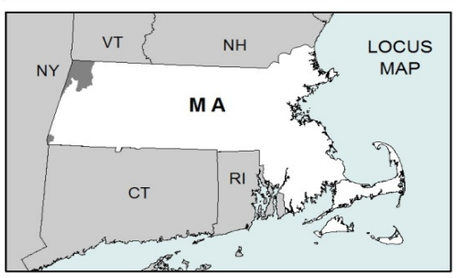
† Names cited in parentheses are unofficial, locally-used names.

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

[1] Note that all or a portion of this surface water is within the Karner Brook Watershed ACEC.
[2] Note that all or a portion of this surface water is within the Hinsdale Flats Watershed ACEC.

4.06: continued





LEGEND

Class (A, B, SA, SB)

River, Stream, Coastline

Lake, Pond, Reservoir

Basin Boundary

Town Boundary

Change in Class

Miles 0 2.5 5

Figure 12

HUDSON

RIVER BASIN

4.06: continued

TABLE 12 HUDSON RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
North Branch Hoosic River	From the MA-VT state line to confluence with the Hoosic River (South Branch Hoosic River)	9.9 - 0.0	B	Cold Water High Quality Water
Hoosic River (South Branch Hoosic River)	From the outlet of Cheshire Reservoir to Adams POTW discharge	23.5 - 15.4	B	Cold Water High Quality Water
	From Adams POTW discharge to confluence with the North Branch Hoosic River	15.4 - 10.3	B	Warm Water
Hoosic River	Confluence of North Branch Hoosic River and Hoosic River (South Branch Hoosic River) to MA-VT state line	10.3 - 0.0	B	Warm Water
Green River	Entire length, New Ashford/ Williamstown	10.8 - 0.0	B	Cold Water
Basset Brook Reservoir	Entire reservoir to outlet in Cheshire and those tributaries thereto		A	PWS ORW
Unnamed Reservoir (Kitchen Brook Reservoir)	Entire reservoir to outlet in Cheshire and those tributaries thereto		A	PWS ORW
Notch Reservoir	Entire reservoir to outlet in North Adams and those tributaries thereto		A	PWS ORW
Mt. Williams Reservoir	Entire reservoir to outlet in North Adams and those tributaries thereto		A	PWS ORW
Williamstown Reservoir (Sherman Springs Reservoir)	Entire reservoir to outlet in Williamstown and those tributaries thereto		A	PWS ORW
Thunder Brook	Entire length in Cheshire and those tributaries thereto		A	PWS-Abandoned ORW
Broad Brook	From the MA-VT state line, Williamstown, to the water supply intake in Williamstown		A	PWS-Abandoned ORW
Bashbish Brook	Source to the MA-NY state line, Mount Washington		B	Cold Water High Quality Water
Bear Swamp Brook	Source in Clarksburg to confluence with Hudson Brook, Clarksburg		B	Cold Water
Birch Brook	Source in Williamstown to confluence with Buxton Brook, Williamstown		B	Cold Water

4.06: continued

TABLE 12 HUDSON RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Buxton Brook	Entire length, Williamstown		B	Cold Water
East Branch Green River	Source in New Ashford to confluence with Green River, New Ashford		B	Cold Water
Gore Brook	Source in Dalton to inlet of Cheshire Reservoir, Cheshire		B	Cold Water
Hemlock Brook	From the MA-NY state line to confluence with the Hoosic River, Williamstown		B	Cold Water
Hopper Brook	Source in Williamstown to confluence with Green River, Williamstown		B	Cold Water
Hoxie Brook	Source in Adams to confluence with Hoosic River, Adams		B	Cold Water
Hunterfield Brook	Source in Clarksburg to confluence with North Branch Hoosic River, North Adams		B	Cold Water
Kinderhook Creek	Source to the MA-NY state line, Hancock		B	Cold Water High Quality Water
Kitchen Brook	Source in Cheshire to inlet of unnamed reservoir (Kitchen Brook Reservoir)		A	Cold Water PWS ORW
	From Kitchen Brook Dam [outlet of unnamed reservoir (Kitchen Brook Reservoir)] to confluence with South Branch Hoosic River, Cheshire		B	Cold Water
McDonald Brook	Entire length, Windsor/Cheshire		B	Cold Water
Miller Brook	Source in Adams to confluence with Tophet Brook, Adams		B	Cold Water
Mitchell Brook	Source in New Ashford to confluence with East Branch Green River, New Ashford		B	Cold Water
Money Brook	Source in Williamstown to confluence with Hopper Brook, Williamstown		B	Cold Water
Notch Brook	Source in Adams to inlet of Notch Reservoir, North Adams		A	Cold Water PWS ORW
	From Notch Reservoir Dam (outlet of Notch reservoir) to confluence with Hoosic River, North Adams		B	Cold Water

4.06: continued

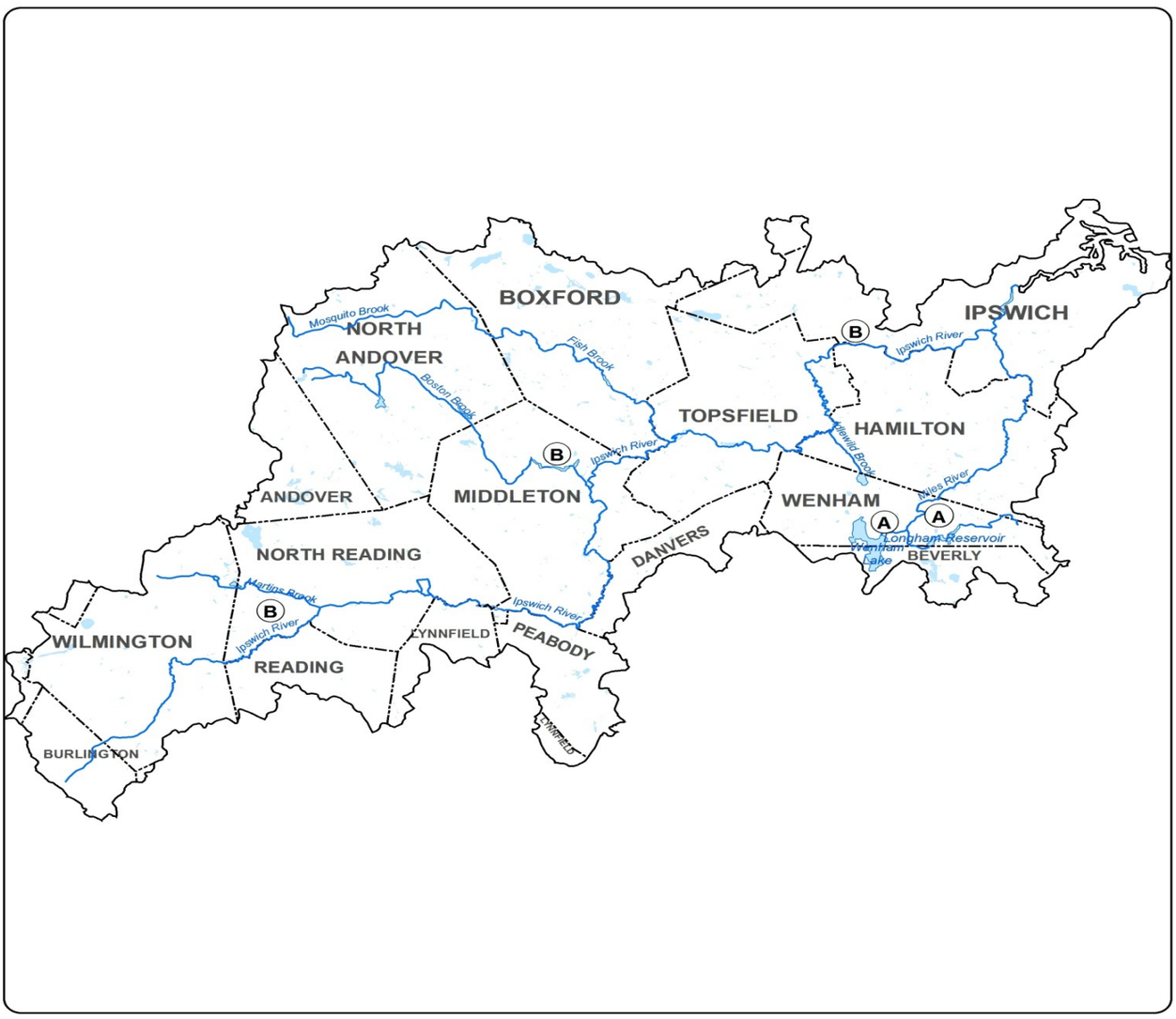
TABLE 12 HUDSON RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Patton Brook	Source in Savoy to confluence with Tophet Brook, Adams		B	Cold Water
Penniman Brook	Source in Cheshire to confluence with Hoosic River, Cheshire		B	Cold Water
Pettibone Brook	Source in Cheshire to inlet of Cheshire Reservoir, Lanesborough		B	Cold Water
Reed Brook	Source in Adams to confluence with Tophet Brook, Adams		B	Cold Water
South Brook	Source in Dalton to confluence with Hoosic River and South Branch Hoosic River, Cheshire		B	Cold Water
Sherman Brook	Source to confluence with Hoosic River, North Adams		B	Cold Water
Sweet Brook	Source in Williamstown to confluence with Hemlock Brook, Williamstown		B	Cold Water
Tunnel Brook	Entire length, North Adams		B	Cold Water
Wheeler Brook	Source in Clarksburg to confluence with Hunterfield Brook, Clarksburg		B	Cold Water

* Acronyms:
ORW = Outstanding Resource Water
PWS = Public Water Supply

† Names cited in parentheses are unofficial, locally-used names.

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued



4.06: continued

TABLE 13
IPSWICH RIVER BASIN*

Surface Water Name†	Surface Water or Segment Boundary	Mile Point‡	Class	Qualifiers
Ipswich River	Source to the Salem Beverly Waterway Canal	41.1 - 16.4	B	Treated Water Supply Warm Water High Quality Water
	From the Salem Beverly Waterway Canal to the tidal portion	16.4 - 4.5	B	Warm Water High Quality Water
	Tidal portion and those tributaries thereto	4.5 - 0.0	SA	Shellfishing
Middleton Pond	Entire pond to outlet in Middleton and those tributaries thereto		A	PWS ORW
Swan Pond	Entire pond to outlet in North Reading and those tributaries thereto		A	PWS ORW
Mill Pond Reservoir	Entire reservoir to outlet in Burlington and those tributaries thereto		A	PWS ORW
Longham Reservoir	Entire reservoir to outlet in Wenham and those tributaries thereto		A	PWS ORW
Wenham Lake	Entire lake to outlet in Wenham and those tributaries thereto		A	PWS ORW
Putnamville Reservoir	Entire reservoir to outlet in Danvers and those tributaries thereto		A	PWS ORW
Suntaug Lake	Entire lake to outlet in Lynn and Peabody and those tributaries thereto		A	PWS ORW
Winona Pond	Entire pond to outlet in Peabody and those tributaries thereto		A	PWS ORW
Unnamed Reservoir (Emerson Brook Reservoir)	Entire reservoir to outlet in Middleton and those tributaries thereto		A	PWS ORW
Fox Creek	Portion in the Great Marsh ACEC[1]		SA	ORW
Neck Creek	Portion in the Great Marsh ACEC[1]		SA, B[2]	ORW
Treadwell Island Creek	Portion in the Great Marsh ACEC[1]		SA, B[2]	ORW

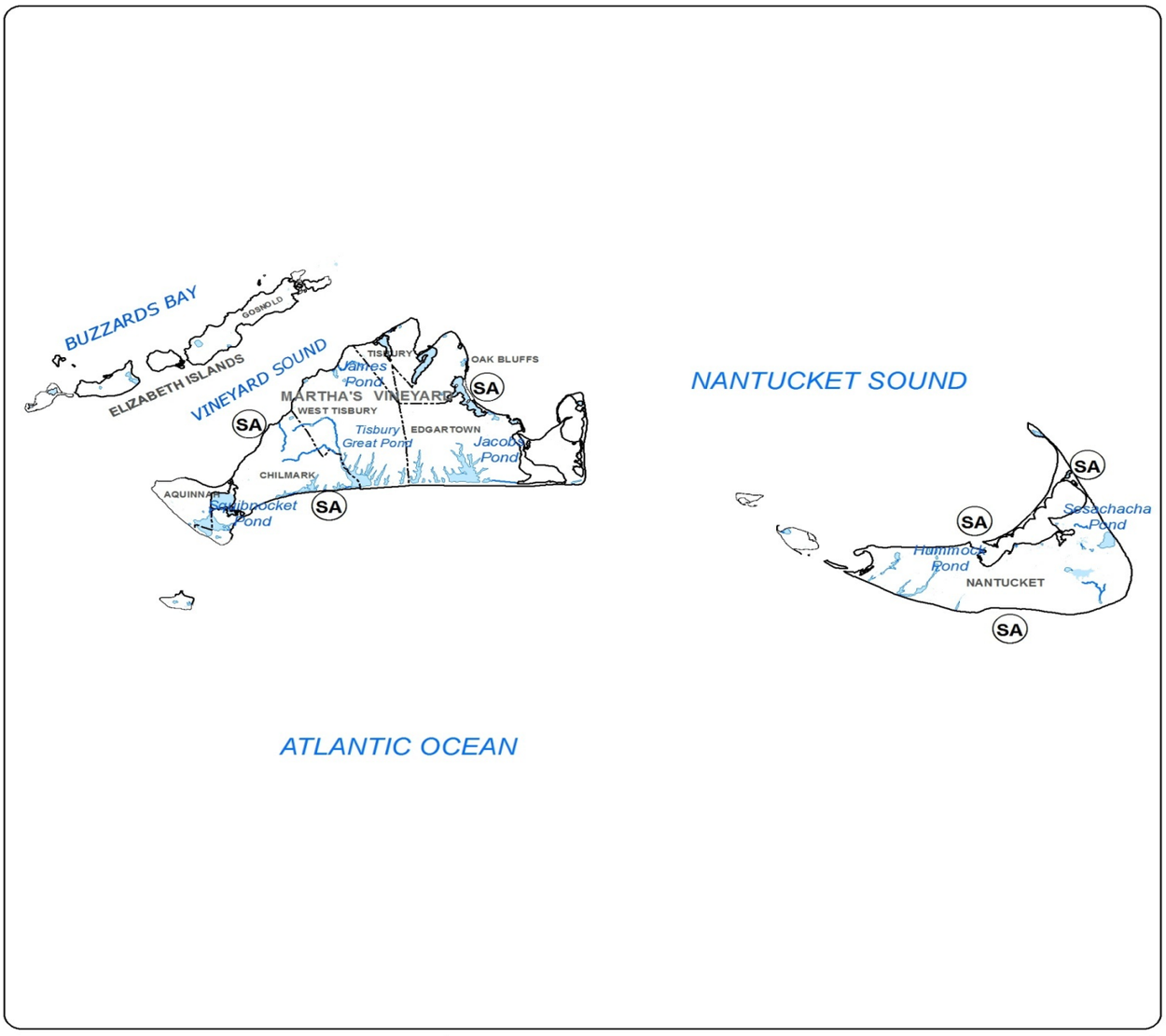
* Acronyms:
ACEC = Area of Critical Environmental Concern
ORW = Outstanding Resource Water
PWS = Public Water Supply

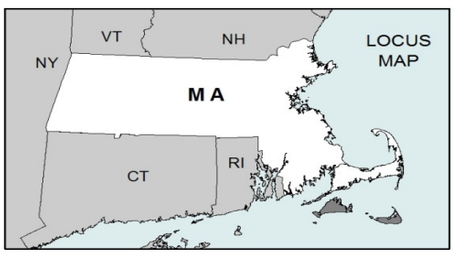
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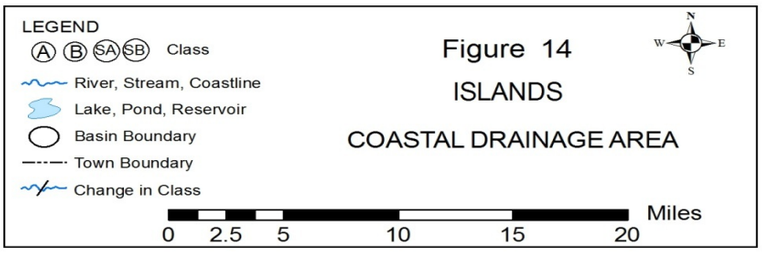
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[1] Formerly the Parker River/Essex Bay ACEC.
[2] Coastal and marine waters Class SA; fresh waters Class B.

4.06: continued







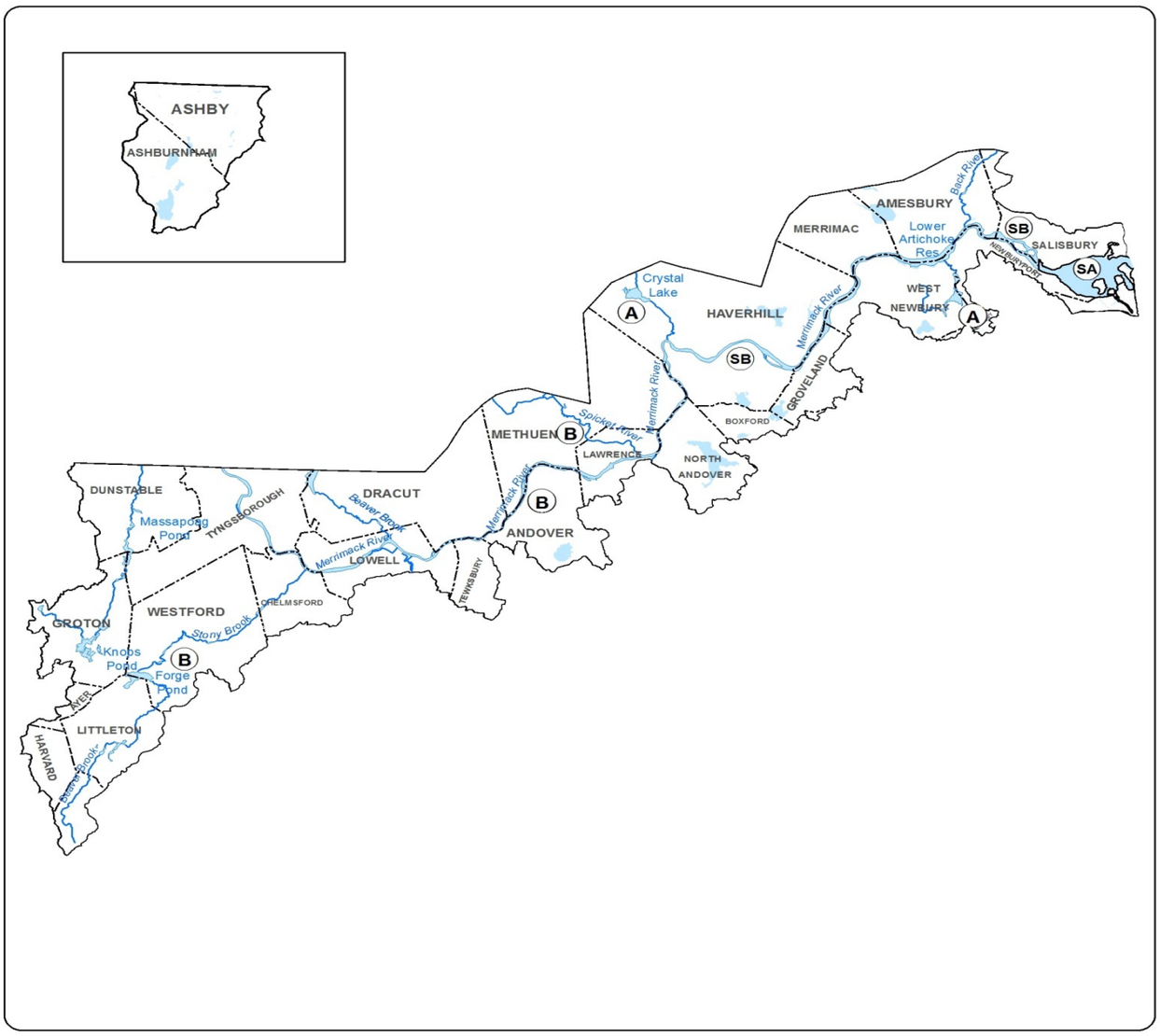
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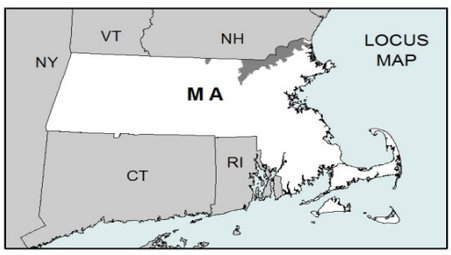
TABLE 14 ISLANDS COASTAL DRAINAGE AREA*				
Surface Water Name	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Atlantic Ocean and other surface waters	All surface waters within and adjacent to the Elizabeth Islands subject to the rise and fall of the tide and within 1,000 feet seaward of mean low water		SA	Shellfishing ORW
	All surface waters subject to the rise and fall of the tide, within the off-shore boundaries of the towns within Nantucket and Dukes counties		SA	Shellfishing

* Acronym:
ORW = Outstanding Resource Water

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued





LEGEND

Ⓐ Ⓑ ⓈⒶ ⓈⒷ Class

River, Stream, Coastline

Lake, Pond, Reservoir

Basin Boundary

Town Boundary

Change in Class

Figure 15

MERRIMACK

RIVER BASIN

N W E S

0 2.5 5 10 15 Miles

4.06: continued

TABLE 15 MERRIMACK RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Merrimack River	From the MA-NH state line to Pawtucket Dam	49.8 - 40.6	B	Warm Water Treated Water Supply CSO
	From Pawtucket Dam to Essex Dam, Lawrence	40.6 - 29.0	B	Warm Water Treated Water Supply CSO
	From Essex Dam, Lawrence to confluence with the Little River, Haverhill	29.0 - 21.9	B	Warm Water CSO
	From confluence with the Little River, Haverhill to the Atlantic Ocean; includes the Back River, Salisbury	21.9 - 0.0	SB	Shellfishing CSO
	The Basin in the Merrimack River Estuary, Newbury and Newburyport		SA	Shellfishing
Stony Brook	From outlet of Forge Pond, Westford to confluence with the Merrimack River, Chelmsford	10.3 - 0.0	B	Warm Water
Beaver Brook	From the MA-NH state line, Dracut, to confluence with the Merrimack River	4.2 - 0.0	B	Cold Water
Spicket River	From the MA-NH state line, Methuen, to the General Street Bridge, Lawrence		B	Warm Water
	From the General Street Bridge, Lawrence, to confluence with the Merrimack River, Lawrence		B	Warm Water CSO
Little River	From the MA-NH state line, Rosemont, to confluence with the Merrimack River, Haverhill	4.3 - 0.0	B	Warm Water
Cobbler Brook	Source in Merrimack to confluence with the Merrimack River	3.7 - 0.0	B	Cold Water
Powwow River	From outlet of Tuxbury Pond, Amesbury, to inlet of Lake Gardner and those tributaries thereto		A	PWS ORW
	From outlet of Lake Gardner to tidal portion	6.4 - 1.3	B	Warm Water
	Tidal portion	1.3 - 0.0	SB	Shellfishing

4.06: continued

TABLE 15 MERRIMACK RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Plum Island River	From Chaces Island, Merrimack River Estuary, to the "high sandy sand bar[1], just north of the confluence with Pine Island Creek, Newbury		SA	Shellfishing ORW
Little Pine Island Creek	Entire length[1], Newbury		SA, B[2]	ORW
Plumbush Creek			SA, B[2]	ORW
Lake Attitash	Entire lake to outlet in Amesbury and those tributaries thereto		A	PWS ORW
Tuxbury Pond	Entire pond to outlet in Amesbury and those tributaries thereto		A	PWS ORW
Millvale Reservoir	Entire reservoir to outlet in Haverhill and those tributaries thereto		A	PWS ORW
Kenoza Lake	Entire lake to outlet in Haverhill and those tributaries thereto		A	PWS ORW
Crystal Lake	Entire lake to outlet in Haverhill and those tributaries thereto		A	PWS ORW
Haggets Pond	Entire pond to outlet in Andover and those tributaries thereto		A	PWS ORW
Fish Brook	Entire length and those tributaries thereto	4.0 - 0.0	A	PWS ORW
Lake Cochichewick	Entire lake to outlet in North Andover and those tributaries thereto		A	PWS ORW
Artichoke Reservoir (Upper and Lower Artichoke Reservoir)	Entire reservoir to outlet in West Newbury and those tributaries thereto		A	PWS ORW
Unnamed Reservoir (Indian Hill Reservoir)	Entire reservoir to outlet in West Newbury and those tributaries thereto		A	PWS ORW
Chadwick Pond (Little Pond)	Entire pond to outlet in Haverhill and those tributaries thereto		A	PWS ORW
Hoveys Pond (Mitchell Pond, Johnson Pond)	Entire pond to outlet in Boxford and those tributaries thereto		A	PWS ORW
Johnsons Pond	Entire pond to outlet in Groveland and those tributaries thereto		A	PWS ORW
Round Pond (Lake Pentucket)	Entire lake to outlet in Haverhill and those tributaries thereto		A	PWS ORW
Crooked Springs Brook	Source in Chelmsford to confluence with Stony Brook, Chelmsford		B	Cold Water

4.06: continued

TABLE 15 MERRIMACK RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Reed Brook	Source in Westford to confluence with Stony Brook, Westford		B	Cold Water

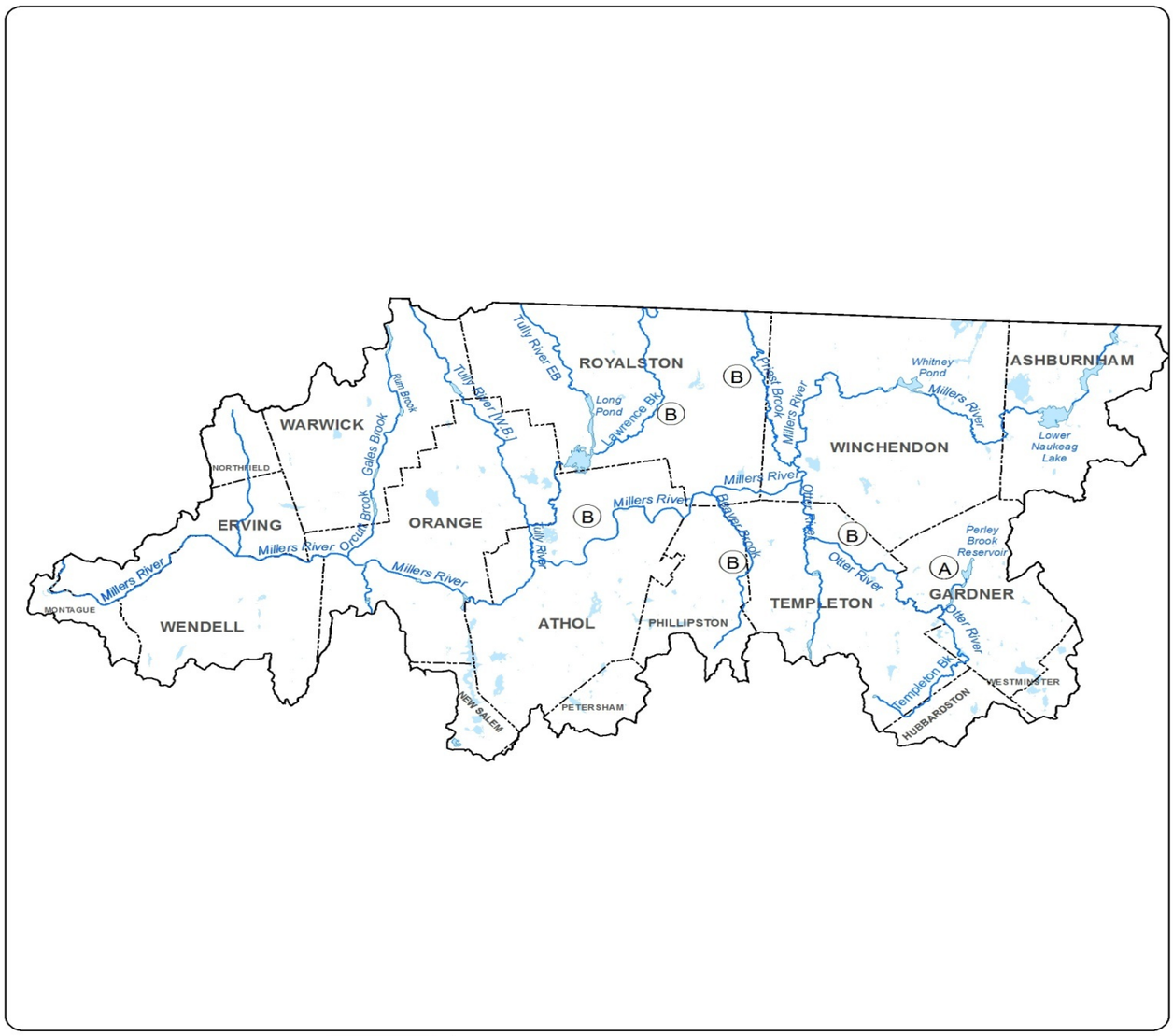
* Acronyms:
ACEC = Area of Critical Environmental Concern
CSO = Combined Sewer Overflow
ORW = Outstanding Resource Water
PWS = Public Water Supply

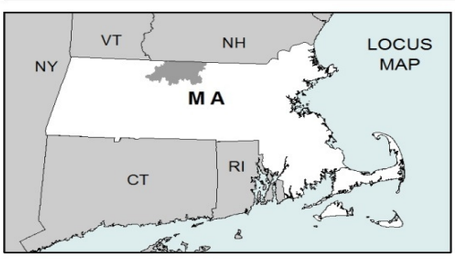
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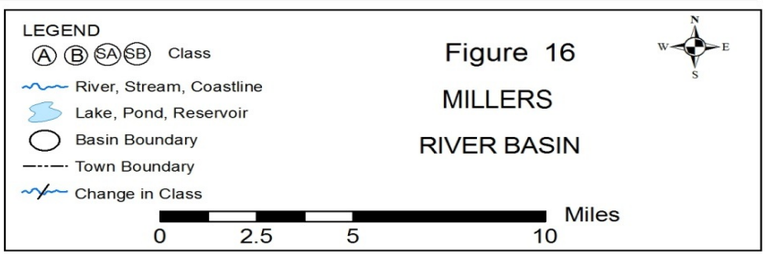
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[1] Note that all or a portion of this surface water is within the Great Marsh ACEC, (formerly Parker River/Essex Bay ACEC).
[2] Coastal and marine waters Class SA; fresh waters Class B.

4.06: continued







4.06: continued

TABLE 16 MILLERS RIVER BASIN*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Millers River	Source to Winchendon POTW discharge	42.2 - 35.7	B	Cold Water
	From Winchendon POTW discharge to confluence with the Connecticut River	35.7 - 0.0	B	Warm Water
Otter River	From Gardner POTW discharge to confluence with the Millers River	9.7 - 0.0	B	Warm Water
Beaver Brook	Source in Phillipston to confluence with the Millers River, Royalston		B	Cold Water
Upper Naukeag Lake	Entire lake to outlet in Ashburnham and those tributaries thereto		A	PWS ORW
Newton Reservoir	Entire reservoir to outlet in Athol and those tributaries thereto		A	PWS ORW
Phillipston Reservoir	Source to outlet in Phillipston and those tributaries thereto		A	PWS-Abandoned ORW
Crystal Lake (Crystal Lake Reservoir)	Entire lake to outlet in Gardner and those tributaries thereto		A	PWS ORW
Cowee Pond (Mamjohn Pond)	Entire pond to outlet in Gardner and those tributaries thereto		A	PWS ORW
Perley Brook Reservoir	Entire reservoir to outlet in Gardner and those tributaries thereto		A	PWS ORW
Lake Ellis (Ellis Pond)	Entire lake to outlet in Athol and those tributaries thereto		A	PWS-Abandoned OR W
Boyce Brook	From New Hampshire state line at Royalston to confluence with East Branch Tully River, Royalston		B	Cold Water
Briggs Brook	Source in Erving to confluence with Millers River, Erving		B	Cold Water
Cheney Brook	Source in Warwick to confluence with West Brook, Orange		B	Cold Water
Collar Brook	Source in Royalston to confluence with West Branch Tully River, Orange		B	Cold Water
Coolidge Brook	Source in Orange to confluence with North Pond Brook, Orange		B	Cold Water
Crow Hill Brook	Source in Templeton to confluence with Trout Brook, Templeton		B	Cold Water
Dunn Brook	Source in Phillipston to confluence with Chickering Brook, Phillipston		B	Cold Water

4.06: continued

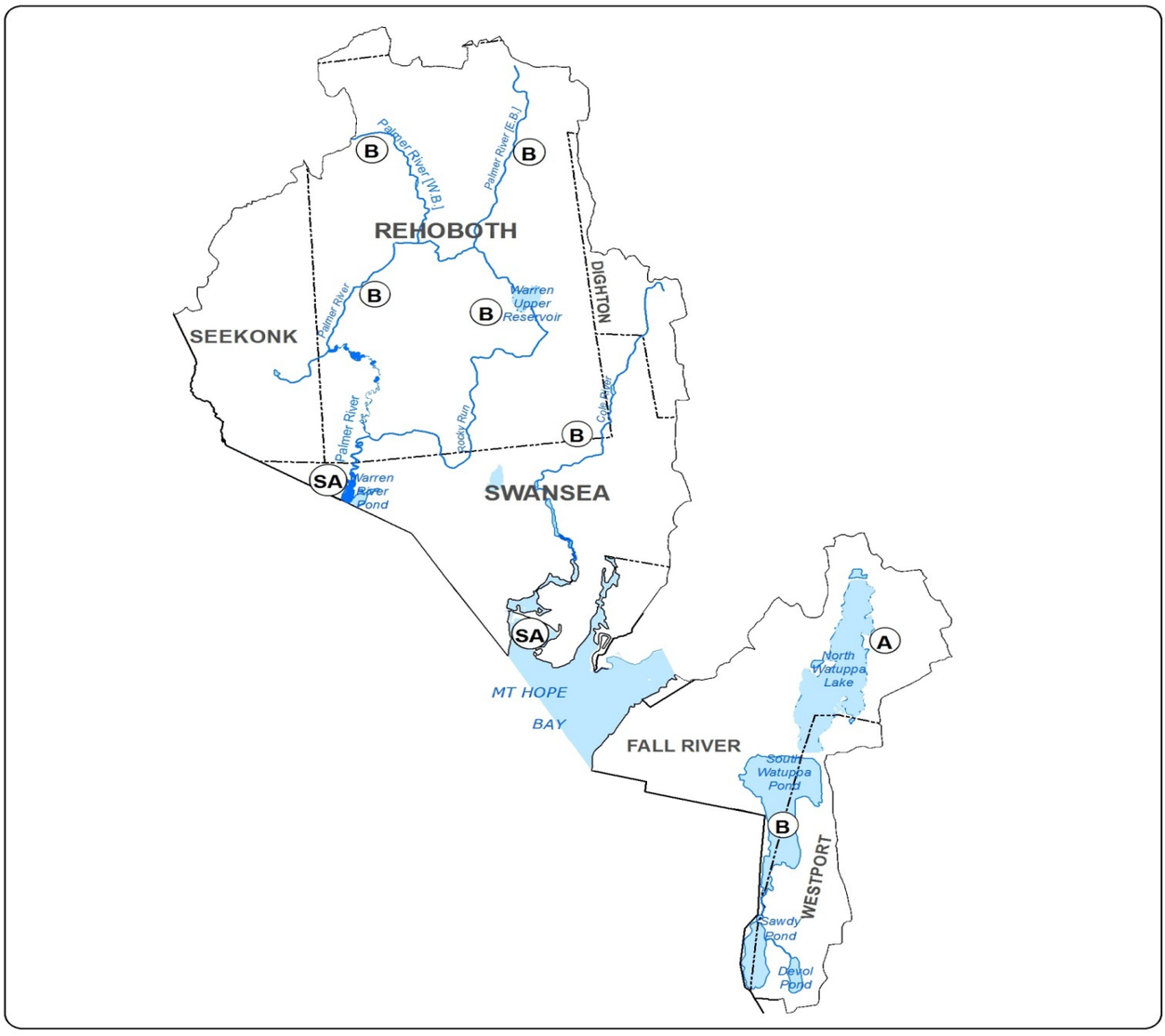
TABLE 16 MILLERS RIVER BASIN (continued)*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Fish Brook	Source in Royalston to confluence with West Branch Tully River, Orange		B	Cold Water
Gate Hill Brook	Source in Wendell to confluence with Mormon Hollow Brook, Wendell		B	Cold Water
Hoyt Brook	Source in Phillipston to confluence with Beaver Brook, Phillipston		B	Cold Water
Jacks Brook	Source in Northfield to confluence with Keyup Brook, Erving		B	Cold Water
Kenny Brook	Source in Royalston to confluence with Millers River, Royalston		B	Cold Water
Keyup Brook	Source in Northfield to confluence with Millers River, Erving		B	Cold Water
Lyons Brook	From the outlet of Ruggles Pond, Wendell, to confluence with the Millers River, Montague		B	Cold Water
Mormon Hollow Brook	Source in Wendell to confluence with Millers River, Wendell		B	Cold Water
Packard Brook	Source in Erving to confluence with Millers River, Erving		B	Cold Water
Rich Brook	Source in Royalston to confluence with Millers River, Athol		B	Cold Water
Thrower Brook	Source in Athol to inlet of South Athol Pond, Athol		B	Cold Water
Tully Brook	From MA-NH state line at Royalston to confluence with East Branch Tully River, Royalston		B	Cold Water
Wilson Brook	Source in Warwick to confluence with Darling Brook, Warwick		B	Cold Water

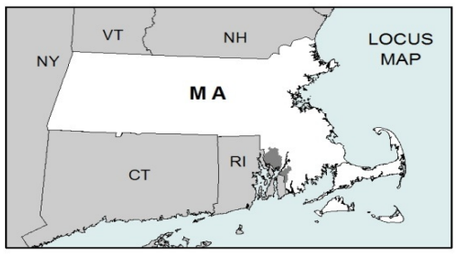
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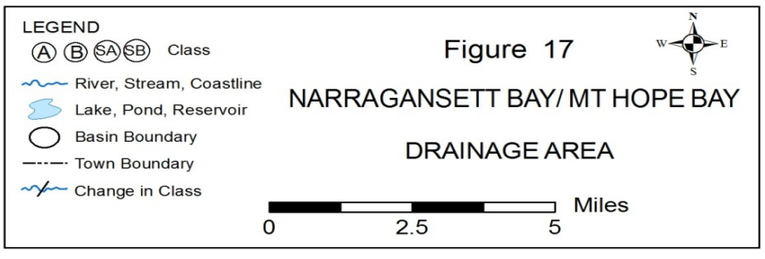
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4.06: continued







4.06: continued

TABLE 17 NARRAGANSETT BAY/MOUNT HOPE BAY DRAINAGE AREA*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Barrington River	Source to the MA-RI state line		SA	Shellfishing
Palmer River	Source to inlet of Shad Factory Pond		B	Cold Water
	From the outlet of Shad Factory Pond to the MA-RI state line		SB	Shellfishing
Mount Hope Bay	East of a straight line from Brayton Point to Buoy 4		SB	Shellfishing CSO
	The Massachusetts portion of the bay landward from an imaginary line drawn from MA/RI state border, Swansea, southeastwardly along the MA/RI state border, Swansea to Buoy 4 (approximately 3/4 of a mile due east of Spar Island, RI), then along an imaginary line from Buoy 4 to Brayton Point, Somerset, excluding the Lee and Cole rivers.		SA	Shellfishing
Cole River	Source to estuary		B	Warm Water
	Estuary, from Route 6, Swansea to mouth at confluence with Mount Hope Bay at old railway grade, Swansea.		SA	Shellfishing
Lee River	Source to estuary		B	Warm Water
	Estuary, from confluence with Lewin Brook, Swansea to mouth at confluence with Mount Hope Bay, Swansea/Somerset		SA	Shellfishing
Quequechan River	Entire length	2.5 - 0.0	B	Warm Water CSO
North Watuppa Pond	Entire pond to outlet in Fall River and those tributaries thereto		A	PWS ORW
Shad Factory Pond	Entire pond to outlet in Rehoboth		B	Treated Water Supply Cold Water
Warren Upper Reservoir (Anawan Reservoir)	Entire reservoir to outlet in Rehoboth		B	Treated Water Supply

4.06: continued

TABLE 17 NARRAGANSETT BAY/MOUNT HOPE BAY DRAINAGE AREA (continued)*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Warren Reservoir (Swansea Reservoir)	Entire reservoir to outlet in Swansea		B	Treated Water Supply

* Acronyms:
CSO = Combined Sewer Overflow
ORW = Outstanding Resource Water
PWS = Public Water Supply

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4.06: continued



Figure 18

NASHUA RIVER BASIN

4.06: continued

TABLE 18 NASHUA RIVER BASIN*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Nashua River	From outlet of Lancaster Millpond, Clinton, to confluence with the North Nashua River, Lancaster (this segment is also known as the South Branch Nashua River)	41.0 - 36.4	B	Warm Water
	From confluence with the North Nashua River, Lancaster, to Pepperell Dam, Pepperell	36.4 - 14.1	B	Warm Water
	From the Pepperell Dam, Pepperell, to the MA-NH state line, Pepperell	14.1 - 10.5	B	Warm Water
North Nashua River	Source to Leominster POTW discharge	18.3 - 12.0	B	Warm Water CSO
	From the Leominster POTW discharge to confluence with the Nashua River	12.0 - 0.0	B	Warm Water
Phillips Brook	From Fitchburg to confluence with the North Nashua River, Fitchburg	1.0 - 0.0	B	Warm Water
Squannacook River	Source to Hollingsworth & Vose Dam, Shirley[1]	14.3 - 3.3	B	Cold Water ORW
	From the Hollingsworth & Vose Dam, Shirley to confluence with the Nashua River[1]	3.3 - 0.0	B	Warm Water
Nissitissit River	From the MA-NH state line, Pepperell, to confluence with the Nashua River[1]		B	Cold Water ORW
Baker Brook	In Fitchburg/Lunenburg, to confluence with the Nashua River, Fitchburg		B	CSO
Unnamed stream (Punch Brook)	From CSO discharge (FIT082) at Oliver Street between Adams and Elm Street, Fitchburg, to confluence with the North Nashua River, Fitchburg (this entire segment is culverted)		B	CSO
Beaver Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Bixby Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Locke Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Mason Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Mine Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Pearl Hill Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW

4.06: continued

TABLE 18 NASHUA RIVER BASIN (continued)*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Pumpkin Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Stewart Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Sucker Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Trap Swamp Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Trapfall Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Trout Brook	In Townsend. Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Walker Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Willard Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Witch Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Wolf Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	ORW
Bayberry Hill Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	Cold Water ORW
Gulf Brook	Portion within the Squannacook and Nissitissit Rivers Sanctuary		B	Cold Water ORW
Lovell Reservoir	Entire reservoir to outlet in Fitchburg and those tributaries thereto		A	PWS ORW
Scott Reservoir	Entire reservoir to outlet in Fitchburg and those tributaries thereto		A	PWS ORW
Wachusett Lake	Entire lake to outlet in Westminster and those tributaries thereto		A	PWS ORW
Overlook Reservoir	Entire reservoir to outlet in Fitchburg and those tributaries thereto		A	PWS ORW
Falulah Reservoir	Entire reservoir to outlet in Fitchburg and those tributaries thereto		A	PWS ORW
Muschopauge Pond (Muschopauge Pond Reservoir)	Entire pond to outlet in Rutland and those tributaries thereto		A	PWS ORW

4.06: continued

TABLE 18 NASHUA RIVER BASIN (continued)*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Notown Reservoir	Entire reservoir to outlet in Leominster and those tributaries thereto		A	PWS ORW
Simonds Pond (Simonds Pond Reservoir)	Entire pond to outlet in Leominster and those tributaries thereto		A	PWS ORW
Goodfellow Pond	Entire pond to outlet in Leominster and those tributaries thereto		A	PWS ORW
Haynes Reservoir	Entire reservoir to outlet in Leominster and those tributaries thereto		A	PWS ORW
Morse Reservoir	Entire reservoir to outlet in Leominster and those tributaries thereto		A	PWS ORW
Distributing Reservoir	Entire reservoir to outlet in Leominster and those tributaries thereto		A	PWS ORW
Fall Brook Reservoir	Entire reservoir to outlet in Leominster and those tributaries thereto		A	PWS ORW
Meetinghouse Pond (Meeting House Reservoir)	Entire pond to outlet in Westminster and those tributaries thereto		A	PWS ORW
Asnebumskit Pond	Entire pond to outlet in Paxton and those tributaries thereto		A	PWS ORW
Fitchburg Reservoir	Entire reservoir to outlet in Ashby and those tributaries thereto		A	PWS ORW
Kendall Reservoir	Entire reservoir to outlet in Holden and those tributaries thereto		A	PWS ORW
Pine Hill Reservoir	Entire reservoir to outlet in Holden and those tributaries thereto		A	PWS ORW
Quinapoxet Reservoir	Entire reservoir to outlet in Holden and those tributaries thereto		A	PWS ORW
Wachusett Reservoir	Entire reservoir to outlet in Clinton and those tributaries thereto		A	PWS ORW
Ashby Reservoir	Entire reservoir to outlet in Ashby and those tributaries thereto		A	ORW
Bixby Reservoir	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Townsend		B	ORW
Coon Tree Pond	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Pepperell		B	ORW
Damon Pond	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Ashby		B	ORW
Flat Pond	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Groton		B	ORW

4.06: continued

TABLE 18 NASHUA RIVER BASIN (continued)*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Graves Pond	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Townsend		B	ORW
Harbor Pond	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Townsend		B	ORW
Heald Pond	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Pepperell		B	ORW
Pearl Hill Brook Pond	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Townsend		B	ORW
Pork Barrel Pond	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Pepperell		B	ORW
Walker Pond	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Townsend		B	ORW
Wright Pond (Lower Wright Pond & Upper Wright Pond)	Portion within the Squannacook and Nissitissit Rivers Sanctuary, Ashby		B	ORW
Ball Brook	Source in Holden to confluence with Stillwater River, Sterling		A	Cold Water PWS ORW
Bumbo Brook	Source in Paxton to inlet of Pine Hill Reservoir, Paxton		A	Cold Water PWS ORW
Unnamed Stream (Burnt Mill Pond Brook)	From outlet of Round Meadow Pond Dam, Westminster, to confluence with the Whitman River, Westminster		B	Cold Water
Goodridge Brook	Entire length, Lancaster/Clinton		B	Cold Water
Malden Brook	Source in West Bolyston to inlet of Wachusett Reservoir, West Bolyston		A	Cold Water PWS ORW
Morse Brook	Source in Shirley to confluence with Nashua River, Shirley		B	Cold Water
Mulpus Brook	Source in Lunenburg to confluence with the Nashua River, Shirley[1]		B	Cold Water
Ponakin Brook	Source in Lancaster to confluence with North Nashua River, Lancaster		B	Cold Water
Poor Farm Brook	Source to inlet of Chaffin Pond, Holden		A	Cold Water PWS ORW
Reedy Meadow Brook	Source in Groton to confluence with the Nashua River, Pepperell[2]		B	Cold Water

4.06: continued

TABLE 18 NASHUA RIVER BASIN (continued)*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Scanlon Brook	Source in Sterling to confluence with Stillwater River, Sterling		A	Cold Water PWS ORW
South Meadow Brook	From outlet of Fitch Pond, Sterling, to inlet of South Meadow Pond, Clinton		B	Cold Water
Steam Mill Brook	Source in Princeton to confluence with Bartlett Pond Brook, Sterling		A	Cold Water PWS ORW
Still River	Source to Rte. 117, Bolton[3]		B	Cold Water

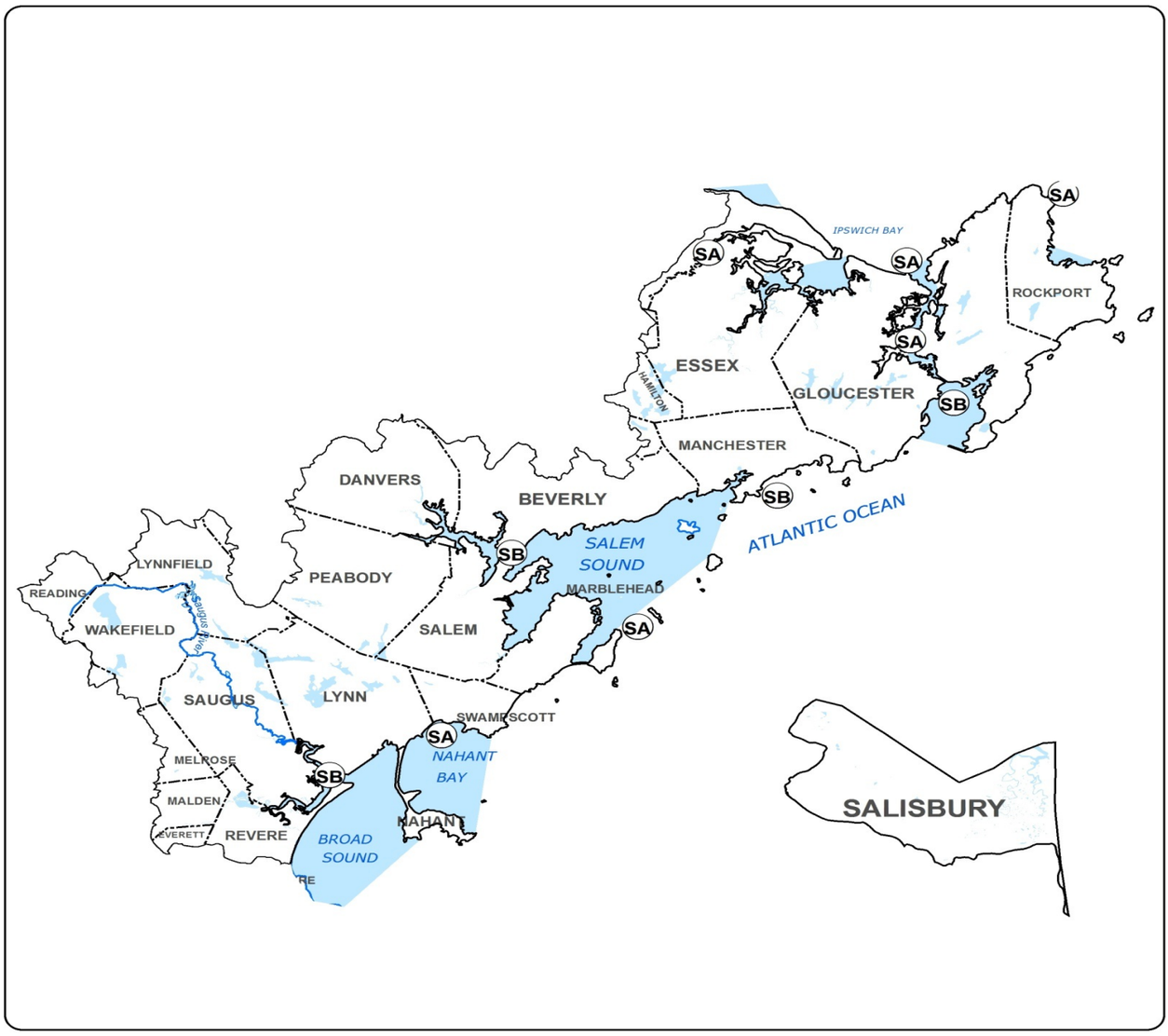
* Acronyms:
ACEC = Area of Critical Environmental Concern
CSO = Combined Sewer Overflow
ORW = Outstanding Resource Water
PWS = Public Water Supply

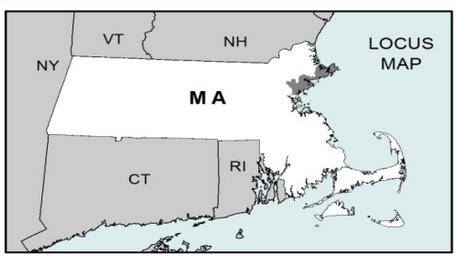
† Names cited in parentheses are unofficial, locally-used names.

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

[1] Note that all or a portion of this surface water is within the Squannacook and Nissitissit Rivers Sanctuary and/or the Squannassit ACEC.
[2] Note that all or a portion of this surface water is within the Petapawag ACEC.
[3] Note that all or a portion of this surface water is within the Central Nashua River Valley ACEC.

4.06: continued





LEGEND

Ⓐ Ⓑ ⓈⒶ ⓈⒷ Class

River, Stream, Coastline

Lake, Pond, Reservoir

Basin Boundary

Town Boundary

Change in Class

Figure 19

NORTH COASTAL

DRAINAGE AREA

N W E S

0 2.5 5 10 Miles

4.06: continued

TABLE 19 NORTH COASTAL DRAINAGE AREA*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Essex River	The coastal and marine portions of the Essex River and those tributaries thereto in the Town of Essex[1]		SA	Shellfishing ORW
Ebben Creek	Portion of the surface water within the Great Marsh ACEC[2]		SA	Shellfishing ORW
Lufkin Creek	Portion of the surface water within the Great Marsh ACEC[2]		SA	Shellfishing ORW
Soginese Creek	Portion of the surface water within the Great Marsh ACEC[2]		SA	Shellfishing ORW
Essex Bay	The waters landward within an imaginary line drawn from the northwestern tip of Gloucester near Coffins Beach to the southern tip of Castle Neck, Ipswich, to the easternmost point of Dilly Island, Essex, and then from Cross Island, Essex, to confluence with Essex River (to Conomo Point, Essex) excluding Walker, Lanes, and Farm creeks.		SA	Shellfishing ORW
Castle Neck River	Portion of the surface water within the Great Marsh ACEC[2]		SA	Shellfishing ORW
Walker Creek			SA	Shellfishing ORW
Lanes Creek			SA	Shellfishing ORW
Farm Creek			SA	Shellfishing ORW
Annisquam River	From confluence with Gloucester Harbor at the Route 127 bridge, Gloucester, north to confluence with Ipswich Bay, Gloucester (an imaginary line drawn from Bald Rocks to Wigwam Point, Gloucester).		SA	Shellfishing
Rockport Harbor (including Back Harbor and a portion of Sandy Bay)	The waters landward from the boundary formed by a straight line drawn between Gully Point, Rockport, and Granite Pier, Rockport (including Back Harbor and a portion of Sandy Bay)		SB	Shellfishing
Gloucester Harbor			SB	Shellfishing CSO
Manchester Harbor			SB	Shellfishing

4.06: continued

TABLE 19 NORTH COASTAL DRAINAGE AREA (continued)*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Beverly Harbor	The waters landward from the boundary formed by a straight line drawn between Juniper Point, Salem, to Hospital Point, Beverly (excluding the Danvers River)		SB	Shellfishing
Salem Harbor (including a portion of Salem Sound and Salem Channel)	The waters landward from the boundary formed by a straight line drawn from Naugus Head, Marblehead, to the northwest point of Bakers Island, Salem, to Hospital Point, Beverly, to Juniper Point, Salem (including a portion of Salem Sound and Salem Channel and excluding Forest River)		SB	Shellfishing
Marblehead Harbor	Entire harbor, landward of an imaginary line drawn northwesterly from the northern tip of Marblehead Neck, Marblehead, to Fort Sewall, Marblehead.		SA	Shellfishing
Massachusetts Bay			SA	Shellfishing
Nahant Bay	Entire bay, landward of an imaginary line drawn southerly from Galloupes Point, Swampscott, to East Point, Nahant.		SA	Shellfishing CSO
Lynn Harbor			SB	Shellfishing CSO
Saugus River	Source to the Saugus River Dam	13.6 - 10.5	A	PWS ORW
	From the outlet of the Saugus River Dam to Saugus Iron Works/Bridge Street	10.5 - 5.1	B	
	From Saugus Iron Works/Bridge Street to Boston Street Bridge	5.1 - 3.1	SB	Shellfishing
	Boston Street Bridge to mouth[3]	3.1 - 0.0	SB	Shellfishing CSO ORW
Pines River	Source to mouth at confluence with the Saugus River and Lynn Harbor, Saugus/Revere[3]		SB	ORW
Diamond Creek			SA	ORW
Spring Pond	Entire pond to outlet in Saugus[4]		B	ORW
Griswold Pond	Entire pond to outlet in Saugus[4]		B	ORW
Babson Reservoir	Entire reservoir to outlet in Gloucester and those tributaries thereto		A	PWS ORW

4.06: continued

TABLE 19 NORTH COASTAL DRAINAGE AREA (continued)*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Haskell Pond (Haskell Reservoir)	Entire pond to outlet in Gloucester and those tributaries thereto		A	PWS ORW
Goose Cove Reservoir	Entire reservoir to outlet in Gloucester and those tributaries thereto		A	PWS ORW
Dykes Pond (Dykes Reservoir)	Entire pond to outlet in Gloucester and those tributaries thereto		A	PWS ORW
Wallace Pond (Wallace Reservoir)	Entire pond to outlet in Gloucester and those tributaries thereto		A	PWS ORW
Fernwood Lake	Entire lake to outlet in Gloucester and those tributaries thereto		A	PWS ORW
Klondike Reservoir (Quarry Reservoir)	Entire reservoir to outlet in Gloucester and those tributaries thereto		A	PWS ORW
Hawkes Pond	Entire pond to outlet in Saugus and those tributaries thereto		A	PWS ORW
Birch Pond	Entire pond to outlet in Saugus and Lynn and those tributaries thereto		A	PWS ORW
Breeds Pond	Entire pond to outlet in Lynn and those tributaries thereto		A	PWS ORW
Walden Pond	Entire pond to outlet in Lynn and those tributaries thereto		A	PWS ORW
Gravelly Pond	Entire pond to outlet in Hamilton and those tributaries thereto		A	PWS ORW
Spring Pond	Entire pond to outlet in Peabody and those tributaries thereto		A	PWS ORW
Cape Pond	Entire pond to outlet in Rockport and those tributaries thereto		A	PWS ORW
Quarry Reservoir (Carlson's Quarry)	Entire reservoir to outlet in Rockport and those tributaries thereto		A	PWS ORW
Crystal Lake	Entire lake to outlet in Wakefield and those tributaries thereto		A	PWS ORW

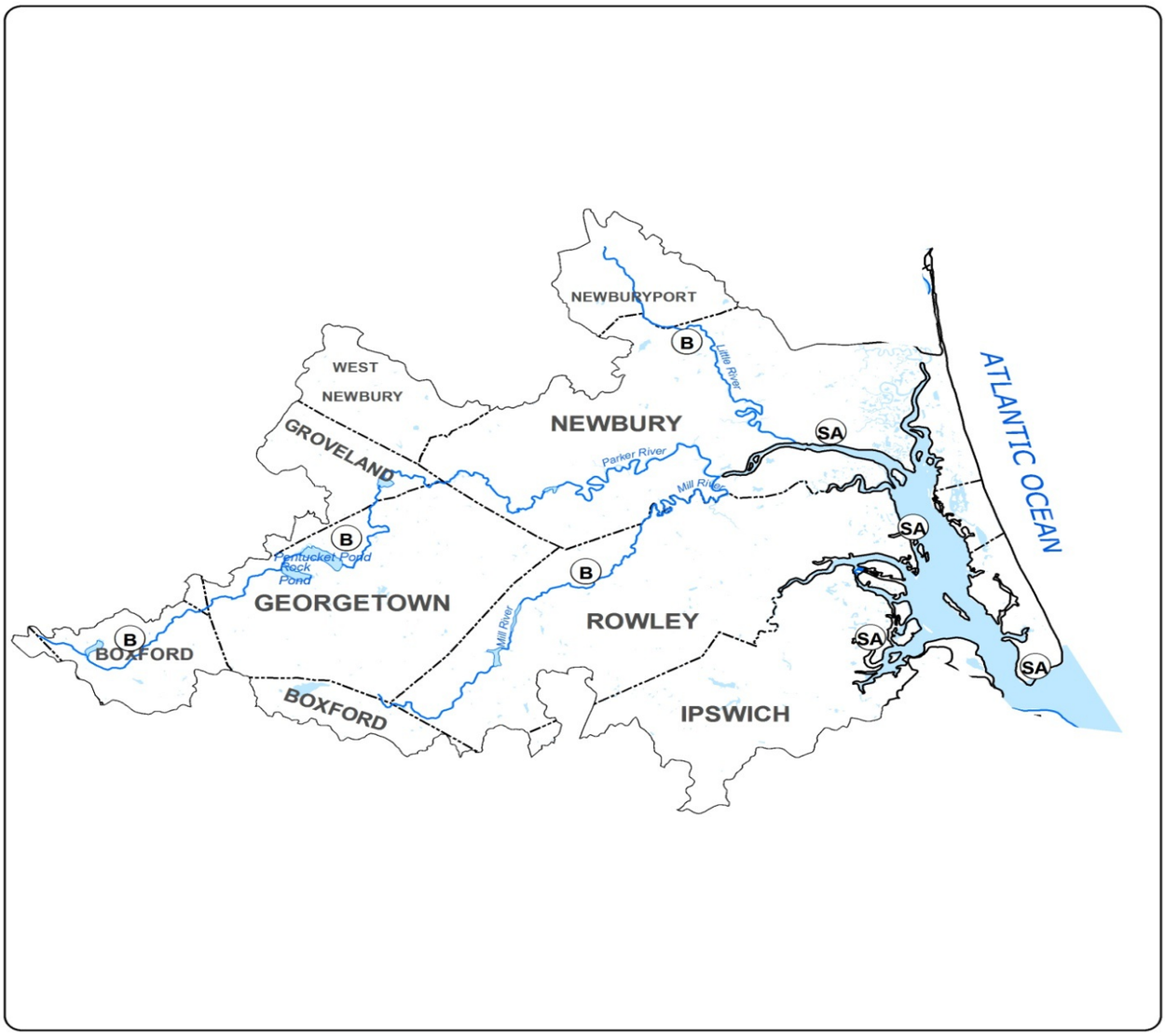
* Acronyms:
ACEC = Area of Critical Environmental Concern
CSO = Combined Sewer Overflow
ORW = Outstanding Resource Water
PWS = Public Water Supply

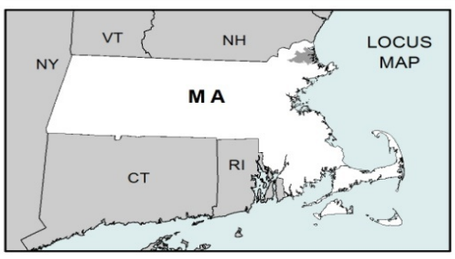
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‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

[1] Note that all or a portion of this surface water is within the Great Marsh ACEC (formerly the Parker River/Essex Bay ACEC).
[2] Formerly the Parker River/Essex Bay ACEC.
[3] Note that all or a portion of this surface water is within the Rumney Marshes ACEC.
[4] Note that all or a portion of this surface water is within the Golden Hills ACEC.

4.06: continued





LEGEND

Ⓐ Ⓑ ⓈⒶ ⓈⒷ Class

River, Stream, Coastline

Lake, Pond, Reservoir

Basin Boundary

Town Boundary

Change in Class

Figure 20

PARKER

RIVER BASIN

N

W E

S

0 2.5 5 Miles

4.06: continued

TABLE 20 PARKER RIVER BASIN*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Parker River	Source in Boxford to tidal portion east of Parker River Dam #1, Newbury	23.1 - 9.0	B	Warm Water High Quality Water
	Tidal portion east of Parker River Dam #1 (NAT ID: MA00241), Newbury, to confluence with Plum Island Sound, Newbury, and those tributaries thereto[1]	9.0 - 0.0	SA	Shellfishing ORW
Mill River	Source in Boxford to tidal portion and those tributaries thereto	9.6 - 2.3	B	Warm Water ORW
	Tidal portion and those tributaries thereto[1]	2.3 - 0.0	SA, B[2]	Shellfishing ORW
Eagle Hill River	Entire length and those tributaries thereto[1]		SA, B[2]	ORW
Third Creek	Entire length, Ipswich[1]		SA, B[2]	ORW
Roger Island River	Entire length and those tributaries thereto[1]		SA, B[2]	ORW
Rowley River	Entire length and those tributaries thereto[1]		SA, B[2]	ORW
Egypt River	Entire length, Ipswich/Rowley[1]		SA, B[2]	ORW
Mud Creek	Entire length, Newbury/Rowley, and those tributaries thereto[1]		SA, B[2]	ORW
Plum Island River	South of “high sandy” sand bar, Newbury, to confluence with Plum Island Sound, Newbury[1]		SA	Shellfishing ORW
Pine Island Creek	Entire length, Newbury[1]		SA, B[2]	ORW
Jericho Creek	Entire length, Newbury[1]		SA, B[2]	ORW
Plum Island Sound	Entire sound, Newbury/Rowley/ Ipswich[1], from confluence with the mouths of the Parker and Plum Island rivers, Newbury, to confluence with the Atlantic Ocean, Ipswich (includes Ipswich Bay)		SA	Shellfishing ORW
Broad Creek	Portion within the Great Marsh ACEC[3], Ipswich		SA	ORW
Carolton Creek	Portion within the Great Marsh ACEC[3], Rowley		SA	ORW
Club Head Creek	Portion within the Great Marsh ACEC[3], Rowley		SA	ORW
Laws Creek	Portion within the Great Marsh ACEC[3], Ipswich		SA	ORW

4.06: continued

TABLE 20 PARKER RIVER BASIN (continued)*				
Surface Water Name †	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Lords Creek	Portion within the Great Marsh ACEC[3], Ipswich		SA	ORW
Metcalf Creek	Portion within the Great Marsh ACEC[3], Ipswich		SA, B[2]	ORW
Paine Creek	Portion within the Great Marsh ACEC[3], Ipswich		SA	ORW
Sand Creek	Portion within the Great Marsh ACEC[3], Rowley		SA, B[2]	ORW
Sawyer Creek	Portion within the Great Marsh ACEC[3], Rowley		SA, B[2]	ORW
Shad Creek	Portion within the Great Marsh ACEC[3], Rowley		SA, B[2]	ORW
Six Goose Creek	Portion within the Great Marsh ACEC[3], Ipswich		SA	ORW
Stacy Creek	Portion within the Great Marsh ACEC[3], Ipswich		SA	ORW
West Creek	Portion within the Great Marsh ACEC[3], Rowley		SA	ORW
Ox Pasture Brook	Portion within the Great Marsh ACEC[3], Rowley		SA, B[2]	ORW
Bull Brook Reservoir	Entire reservoir to outlet in Ipswich and those tributaries thereto		A	PWS ORW
Dow Brook Reservoir	Entire reservoir to outlet in Ipswich and those tributaries thereto		A	PWS ORW

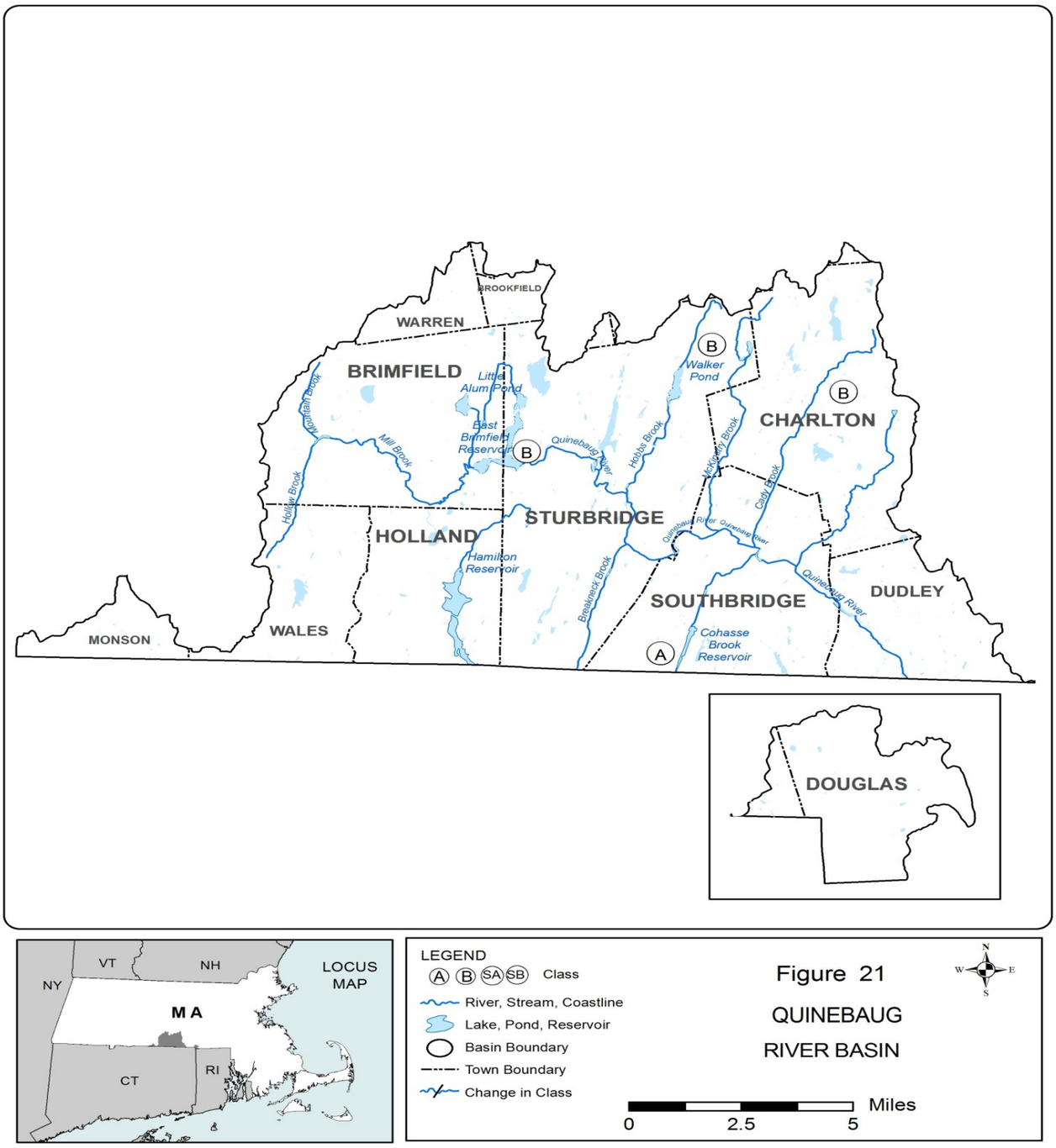
* Acronyms:
ACEC = Area of Critical Environmental Concern
NAT ID = National Inventory of Dams
ORW = Outstanding Resource Water
PWS = Public Water Supply

† Names cited in parentheses are unofficial, locally-used names.

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

[1] Note that all or a portion of this surface water is within the Great Marsh ACEC (formerly Parker River/Essex Bay ACEC).
[2] Coastal and marine waters Class SA; fresh waters Class B.
[3] Formerly the Parker River/Essex Bay ACEC.

4.06: continued



4.06: continued

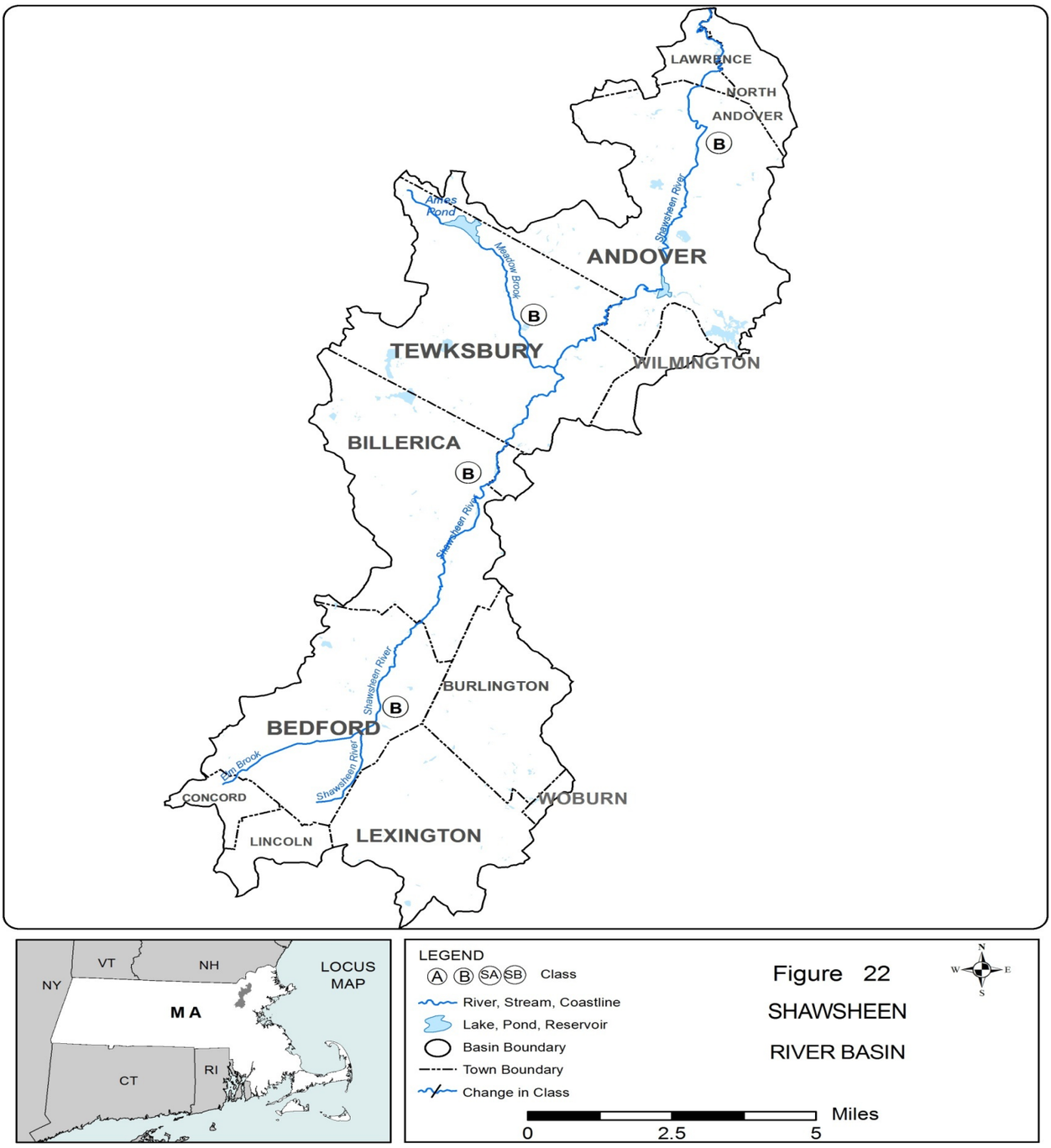
TABLE 21 QUINEBAUG RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Quinebaug River	From outlet of Hamilton Reservoir to Sturbridge POTW discharge	0.7 - 19.7	B	Cold Water High Quality Water
	From Sturbridge POTW discharge to confluence with Cady Brook	19.7 - 13.4	B	Cold Water
	From confluence with Cady Brook to Southbridge POTW discharge	13.4 - 12.2	B	Warm Water
	From Southbridge POTW discharge to MA-CT state line	12.2 - 7.9	B	Warm Water
Cady Brook	From outlet of Glen Echo Lake to Charlton City POTW discharge	6.1 - 5.1	B	Warm Water High Quality Water
	From Charlton City POTW discharge to confluence with Quinebaug River	5.1 - 0.0	B	Warm Water
Cohasse Brook Reservoir (Lo Cohasse Brook Reservoir)	Entire reservoir to outlet in Southbridge and those tributaries thereto		A	PWS ORW
No. 3 Reservoir (Hatchet Brook Reservoir #3)	Entire reservoir to outlet in Southbridge and those tributaries thereto		A	PWS ORW
Tufts Branch	From source in Dudley to the MA-CT state line		B	Cold Water

* Acronyms:
ORW = Outstanding Resource Water
PWS = Public Water Supply

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‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued

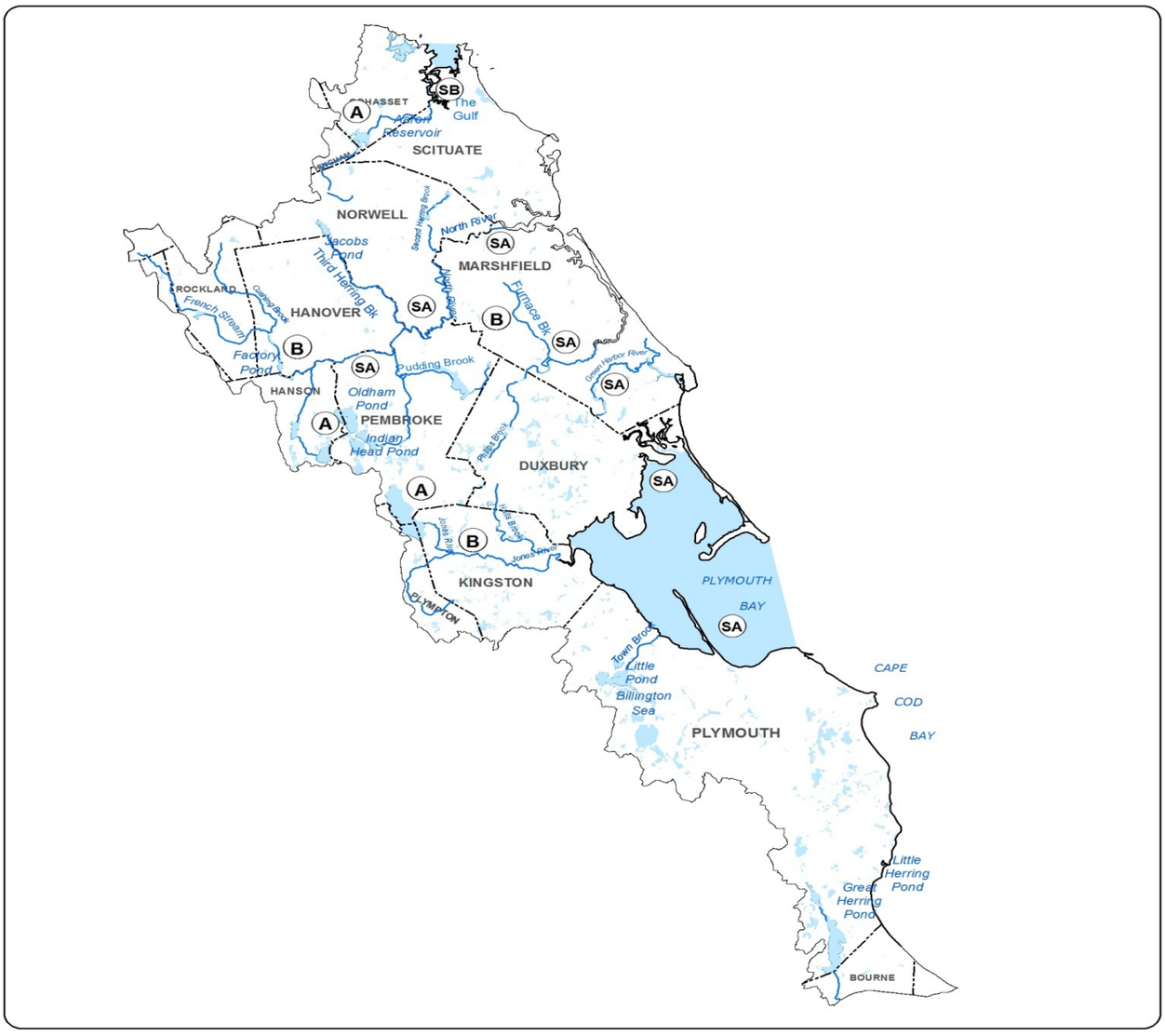


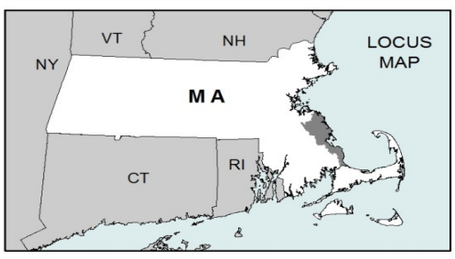
4.06: continued

TABLE 22 SHAWSHEEN RIVER BASIN				
Surface Water Name	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Shawsheen River	Source to drinking water intake in Billerica (approximately Cook Street and Alexander Road)	25.0 - 18.0	B	Treated Water Supply Warm Water
	From drinking water intake in Billerica to confluence with the Merrimack River	18.0 - 0.0	B	Warm Water

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued





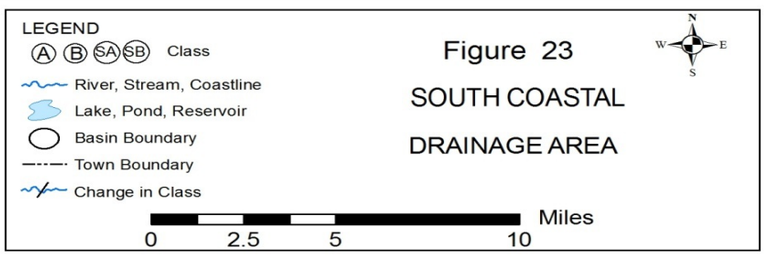


Figure 23

SOUTH COASTAL

DRAINAGE AREA

4.06: continued

TABLE 23 SOUTH COASTAL DRAINAGE AREA*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Cohasset Harbor	The waters south of an imaginary line drawn from the northwestern point of Scituate Neck, Scituate, westerly to the tip north of Quarry Point, Cohasset, not including Cohasset Cove, Cohasset/Scituate.		SA	Shellfishing
Little Harbor	Entire harbor, landward of the Atlantic Avenue Bridge, Cohasset		SA	Shellfishing
The Gulf			SB	Shellfishing
Scituate Harbor	Entire harbor, landward of an imaginary line drawn from the elbow of the jetty southeast off Lighthouse Point, Scituate, to the jetty northeast of the U.S. Coast Guard Station, Scituate.		SA	Shellfishing
French Stream	Entire length, Rockland/Abington/ Hanover		B	Warm Water
Drinkwater River	Entire length, Hanover		B	Warm Water
Indian Head River	Source to Curtis Crossing Dam, Hanover/Hanson/Pembroke		B	Warm Water
	From the Curtis Crossing Dam to confluence with Herring Brook, Hanover/Pembroke[1]		B	Warm Water ORW
North River	From the confluence of Indian Head River and Herring Brook, Pembroke/Hanover, to confluence with Third Herring Brook, Hanover/Norwell[1]	11.6 - 9.6	SA	Shellfishing ORW
	From the confluence with Third Herring Brook, Hanover/Norwell, to Main Street (Rte 3A), Marshfield/Scituate[1]	9.6 - 2.0	SA	Shellfishing ORW
	Main Street (Rte 3A), Marshfield/Scituate, to confluence with South River/Massachusetts Bay, Marshfield/Scituate	2.0 - 0.0	SA	Shellfishing
South River	Source in Duxbury to dam at Main Street (Rte 3A), Marshfield/Scituate[1]		B	ORW
	From the dam at Main Street, Marshfield to confluence with North River, Marshfield[1]		SA	Shellfishing ORW
Green Harbor			SA	Shellfishing

4.06: continued

TABLE 23 SOUTH COASTAL DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Jones River	Source to former Wapping Road Dam, Kingston	7.0 - 3.4	B	Warm Water High Quality Water
	From former Wapping Road Dam, Kingston, to Elm Street Dam, Kingston	3.4 - 2.5	B	Warm Water
Cove Brook	Portion of this surface water within the North River Corridor, Marshfield[1]		SA, B[2]	ORW
Herring Brook	Portion of this surface water within the North River Corridor, Pembroke[1]		SA, B[2]	ORW
Iron Mine Brook	Portion of this surface water within the North River Corridor, Hanover[1]		SA, B[2]	ORW
Second Herring Brook	Portion of this surface water within the North River Corridor, Norwell[1]		SA, B[2]	ORW
Stony Brook	Portion of this surface water within the North River Corridor, Norwell[1]		SA, B[2]	ORW
Third Herring Brook	Portion of this surface water within the North River Corridor, Norwell[1]		SA, B[2]	ORW
Robinson Creek	Portion of this surface water within the North River Corridor, Pembroke[1]		SA, B[2]	ORW
Furnace Pond	Entire pond to outlet in Pembroke and those tributaries thereto		A	PWS ORW
Silver Lake	Entire lake to outlet in Kingston and those tributaries thereto		A	PWS ORW
Mounce Pond	Portion of this surface water within the North River Corridor		SA, B[2]	ORW
Great Sandy Bottom Pond	Entire pond to outlet in Pembroke and those tributaries thereto		A	PWS ORW
Great South Pond	Entire pond to outlet in Plymouth and those tributaries thereto		A	PWS ORW
Lily Pond	Entire pond to outlet in Cohasset and those tributaries thereto		A	PWS ORW
Little South Pond (South Pond)	Entire pond to outlet in Plymouth and those tributaries thereto		A	PWS ORW
Old Oaken Bucket Pond (Herring Brook Pond)	Entire pond to outlet in Scituate and those tributaries thereto		A	PWS ORW
Aaron River Reservoir	Entire reservoir to outlet in Cohasset and those tributaries thereto		A	PWS ORW

4.06: continued

TABLE 23 SOUTH COASTAL DRAINAGE AREA (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Abington Rockland Reservoir (Hingham Street Reservoir)	Entire reservoir to outlet in Rockland and those tributaries thereto		A	PWS ORW
Huldah Brook	Source in Marshfield to confluence with Pudding Brook, Pembroke		B	Cold Water

* Acronyms:
ORW = Outstanding Resource Water
PWS = Public Water Supply

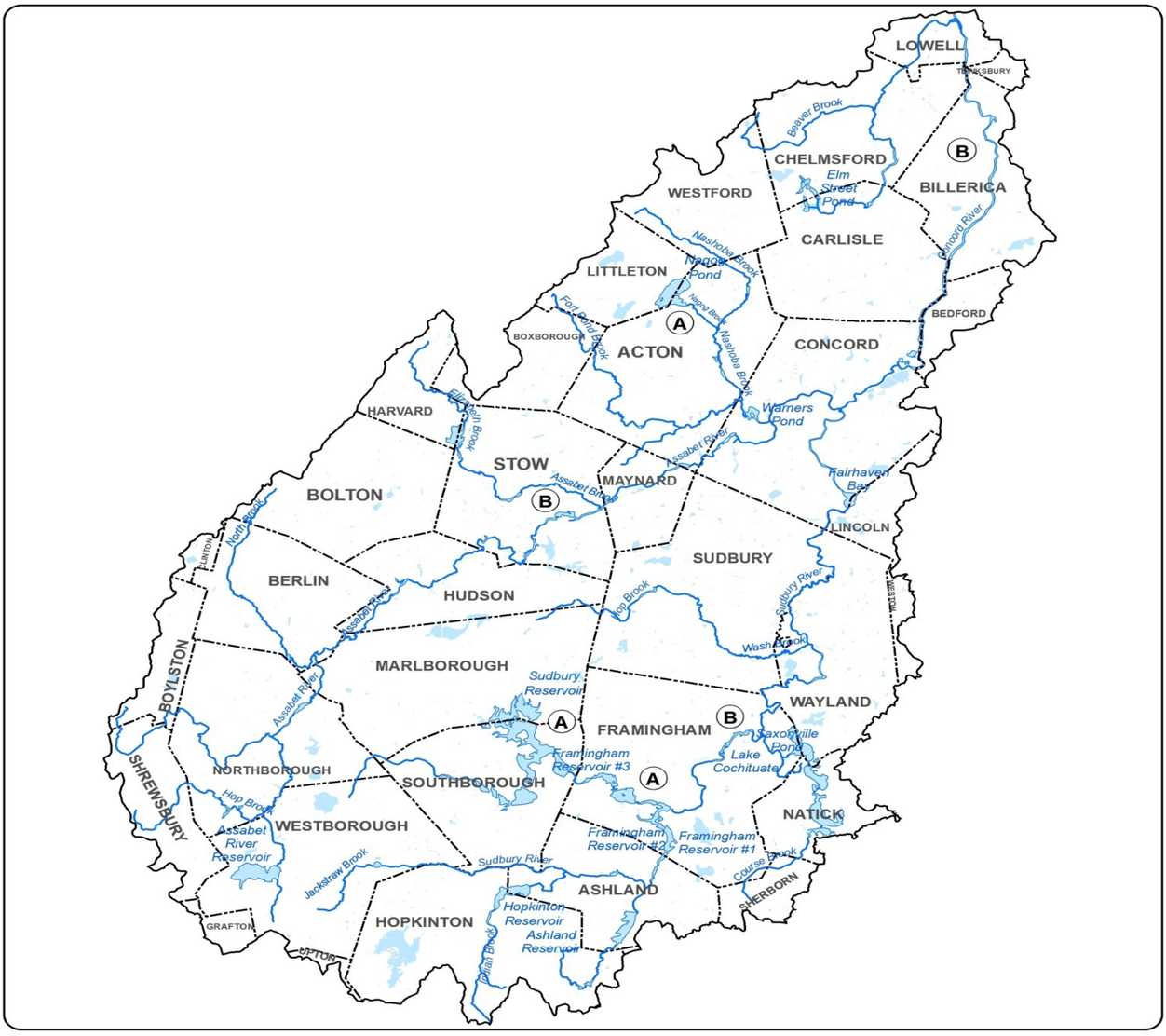
† Names cited in parentheses are unofficial, locally-used names.

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

[1] Note that all or a portion of these surface waters are within the North River Corridor as defined by the "Scenic and Recreational River Protective Order for the North River", issued pursuant to M.G.L. 21, § 17B, and St. 1978, c. 367, § 62.

[2] Coastal and marine waters Class SA; fresh waters Class B.

4.06: continued



4.06: continued

TABLE 24 SUDBURY, ASSABET, and CONCORD (SuAsCo) RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Sudbury River	From outlet of Cedar Swamp Pond to Fruit Street Bridge in Hopkinton[1]	Above 29.1	B	Warm Water ORW
	From Fruit Street Bridge, Hopkinton to outlet of Saxonville Pond	29.1 - 16.2	B	Warm Water High Quality Water
	From outlet of Saxonville Pond to confluence with Hop Brook, Wayland	16.2 - 10.6	B	High Quality Water
Denney Brook	Entire brook[1]		B	ORW
Jackstraw Brook	Source in Westborough to Upton Road, first crossing south of Hopkinton Road, Westborough[1]		B	Cold Water ORW
	From Upton Road, first crossing south of Hopkinton Road, Westborough, to the inlet of Cedar Swamp Pond, Westborough[1]		B	ORW
Picadilly Brook	Entire brook[1]		B	ORW
Rutters Brook	Entire brook[1]		B	ORW
Whitehall Brook	Entire brook[1]		B	ORW
Hop Brook	From Carding Mill Pond Dam to confluence with the Sudbury River	9.7 - 0.0	B	Warm Water
Concord River	From confluence of Assabet and Sudbury Rivers to the Billerica Water Supply Intake	15.4 - 5.9	B	Warm Water Treated Water Supply
	From the Billerica Water Supply Intake to Rogers Street, Lowell	5.9 - 1.0	B	Warm Water
	From Rogers Street, Lowell to confluence with the Merrimack River	1.0 - 0.0	B	Warm Water CSO

4.06: continued

TABLE 24 SUDBURY, ASSABET, and CONCORD (SuAsCo) RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Assabet River	Source to the Westborough POTW discharge	31.8 - 30.4	B	Warm Water High Quality Water
	From the Westborough POTW discharge to outlet of Boones Pond (Lake Boon)	30.4 - 12.4	B	Warm Water
	From outlet of Boones Pond to confluence with the Sudbury River, forming the headwaters of the Concord River	12.4 - 0.0	B	Warm Water
Nagog Pond	Entire pond to outlet in Acton and those tributaries thereto		A	PWS ORW
Westborough Reservoir (Sandra Pond)	Entire reservoir to outlet in Westborough and those tributaries thereto		A	PWS ORW
Gates Pond (Gates Pond Reservoir)	Entire pond to outlet in Berlin and those tributaries thereto		A	PWS ORW
White Pond	Entire pond to outlet in Hudson and those tributaries thereto		A	PWS ORW
Millham Reservoir	Entire reservoir to outlet in Marlborough and those tributaries thereto		A	PWS ORW
Lake Williams Reservoir (Williams Lake)	Entire reservoir to outlet in Marlborough and those tributaries thereto		A	PWS ORW
Sudbury Reservoir	Entire reservoir in Westborough/ Marlborough/Southborough/ Framingham and those tributaries thereto		A	PWS ORW
MWRA Open Canal (Wachusett Aqueduct)	Entire length and those tributaries thereto		A	PWS ORW
Framingham Reservoir No. 3	Entire reservoir to outlet in Framingham and those tributaries thereto		A	PWS ORW
Cedar Swamp Pond	The portion of the surface water within the Cedar Swamp ACEC		B	ORW
Pine Brook	Source in Wayland to confluence with Sudbury River, Wayland		B	Cold Water
Sheep Fall Brook	Source in Marlborough to confluence with Flagg Brook, Marlborough		B	Cold Water

4.06: continued

TABLE 24 SUDBURY, ASSABET, and CONCORD (SuAsCo) RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Unnamed tributary to Assabet River	Entire length from source south of Athens St. in Stow to confluence with the Assabet River, Stow		B	Cold Water

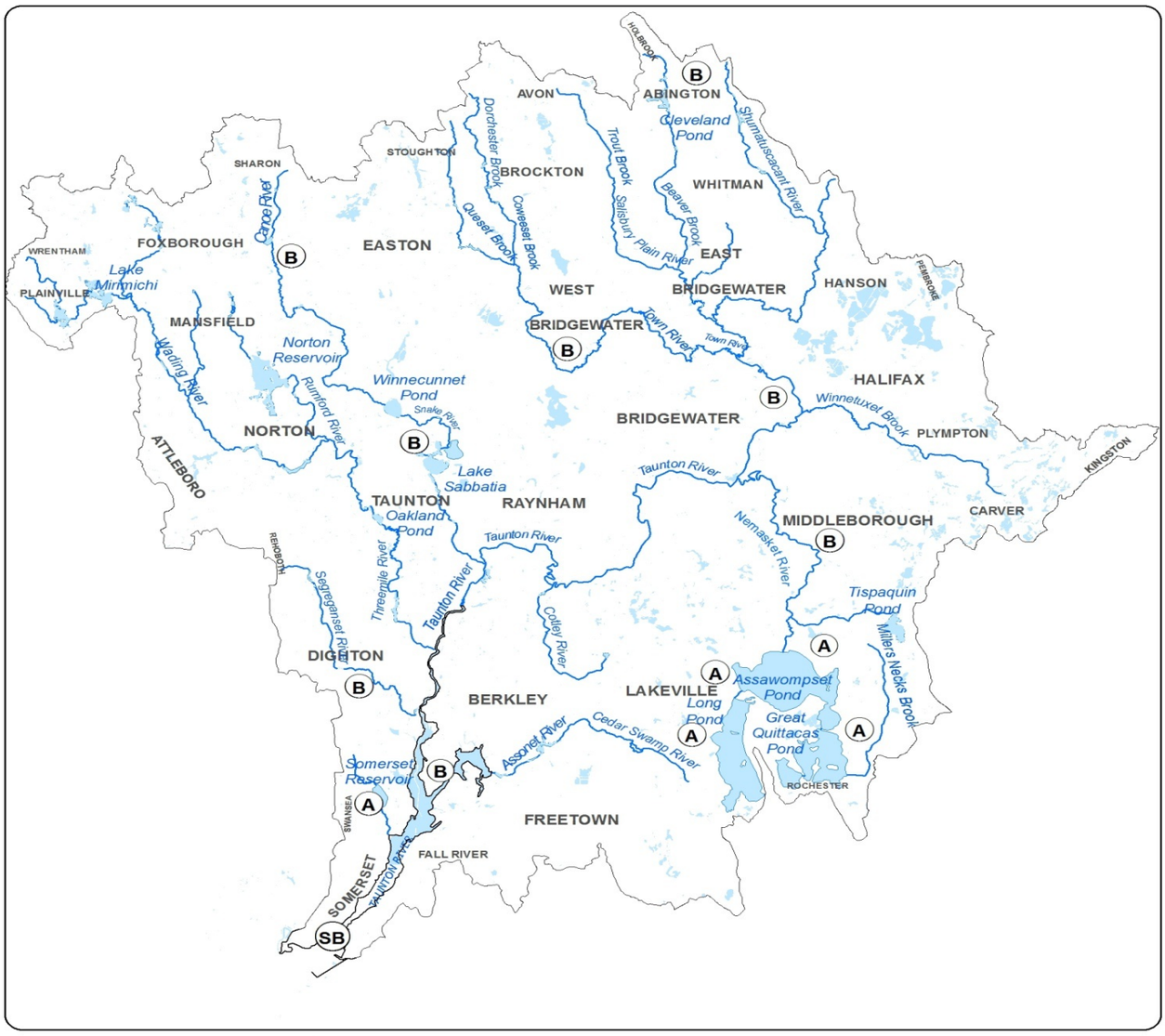
* Acronyms:
ACEC = Area of Critical Environmental Concern
CSO = Combined Sewer Overflow
MWRA = Massachusetts Water Resources Authority
ORW = Outstanding Resource Water
PWS = Public Water Supply

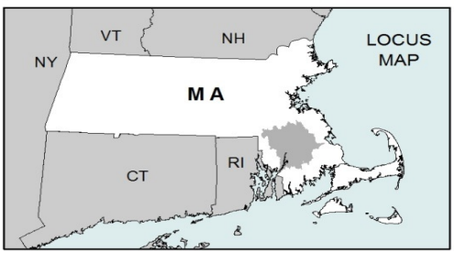
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[1] Note that all or a portion of this surface water is within the Cedar Swamp ACEC.

4.06: continued





LEGEND

Ⓐ Ⓑ ⓈⒶ ⓈⒷ Class

River, Stream, Coastline

Lake, Pond, Reservoir

Basin Boundary

Town Boundary

Change in Class

0 2.5 5 10 Miles

Figure 25

TAUNTON

RIVER BASIN

4.06: continued

TABLE 25 TAUNTON RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Taunton River	From confluence with the Town River to Rt. 24 Bridge	40.8 - 21.2	B	Warm Water
	From Rt. 24 Bridge to its mouth at confluence with Mt. Hope Bay	21.2 - 0.0	SB	Shellfishing CSO
Salisbury Plain River	From Brockton POTW discharge to confluence with the Matfield River, East Bridgewater		B	Warm Water
Matfield River	From confluence with the Salisbury Plain River, East Bridgewater, to confluence with the Town River, East Bridgewater		B	Warm Water
Town River	From Bridgewater POTW discharge to confluence with the Matfield and Taunton Rivers	2.4 - 0.0	B	Warm Water
Nemasket River	From Middleborough POTW discharge to confluence with the Taunton River		B	Warm Water
Saw Mill Brook	Entire length	1.5 - 0.0	B	Warm Water
Mill River	From outlet of Lake Sabbatia, Taunton, to confluence with the Taunton River	3.4 - 0.0	B	Warm Water
Three Mile River	Source to confluence with the Taunton River	15.8 - 0.0	B	Warm Water
Wading River (Attleboro Reservoir)	Source to PWS intake in Mansfield and those tributaries thereto		A	PWS ORW
	From water supply intake, Mansfield to confluence with Three Mile River		B	Warm Water
Assawompset Pond	Entire pond to outlet in Lakeville and those tributaries thereto		A	PWS ORW
Great Quittacas Pond	Entire pond to outlet in Lakeville and those tributaries thereto		A	PWS ORW
Little Quittacas Pond	Entire pond to outlet in Lakeville and those tributaries thereto		A	PWS ORW
Long Pond	Entire pond to outlet in Lakeville and those tributaries thereto		A	PWS ORW
Pocksha Pond	Entire pond to outlet in Lakeville and those tributaries thereto		A	PWS ORW
Somerset Reservoir	Entire reservoir to outlet in Somerset and those tributaries thereto, including Segreganset River from pumping station, Dighton, to source		A	PWS ORW

4.06: continued

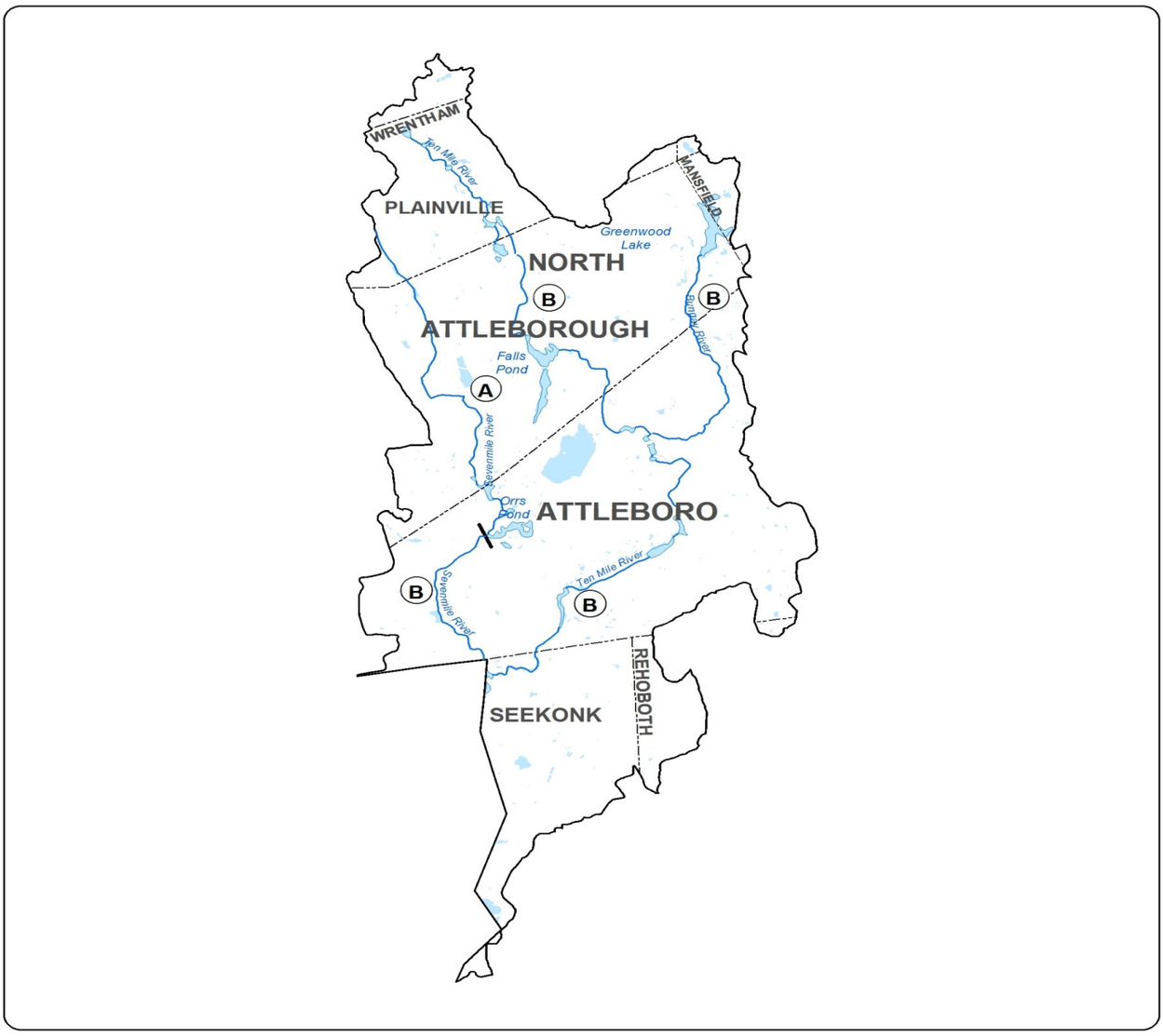
TABLE 25 TAUNTON RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Monponsett Pond	Entire pond to outlet in Halifax and those tributaries thereto (inclusive of east and west basins; feeder to Silver Lake water supply listed in the South Coastal drainage area)		A	PWS ORW
Elders Pond	Entire pond to outlet in Lakeville and those tributaries thereto		A	PWS ORW
Brockton Reservoir (Avon Reservoir, Salisbury Brook Reservoir)	Entire reservoir to outlet in Avon and those tributaries thereto		A	PWS ORW

* Acronyms:
CSO = Combined Sewer Overflow
ORW = Outstanding Resource Water
PWS = Public Water Supply

† Names cited in parentheses are unofficial, locally-used names

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued



4.06: continued

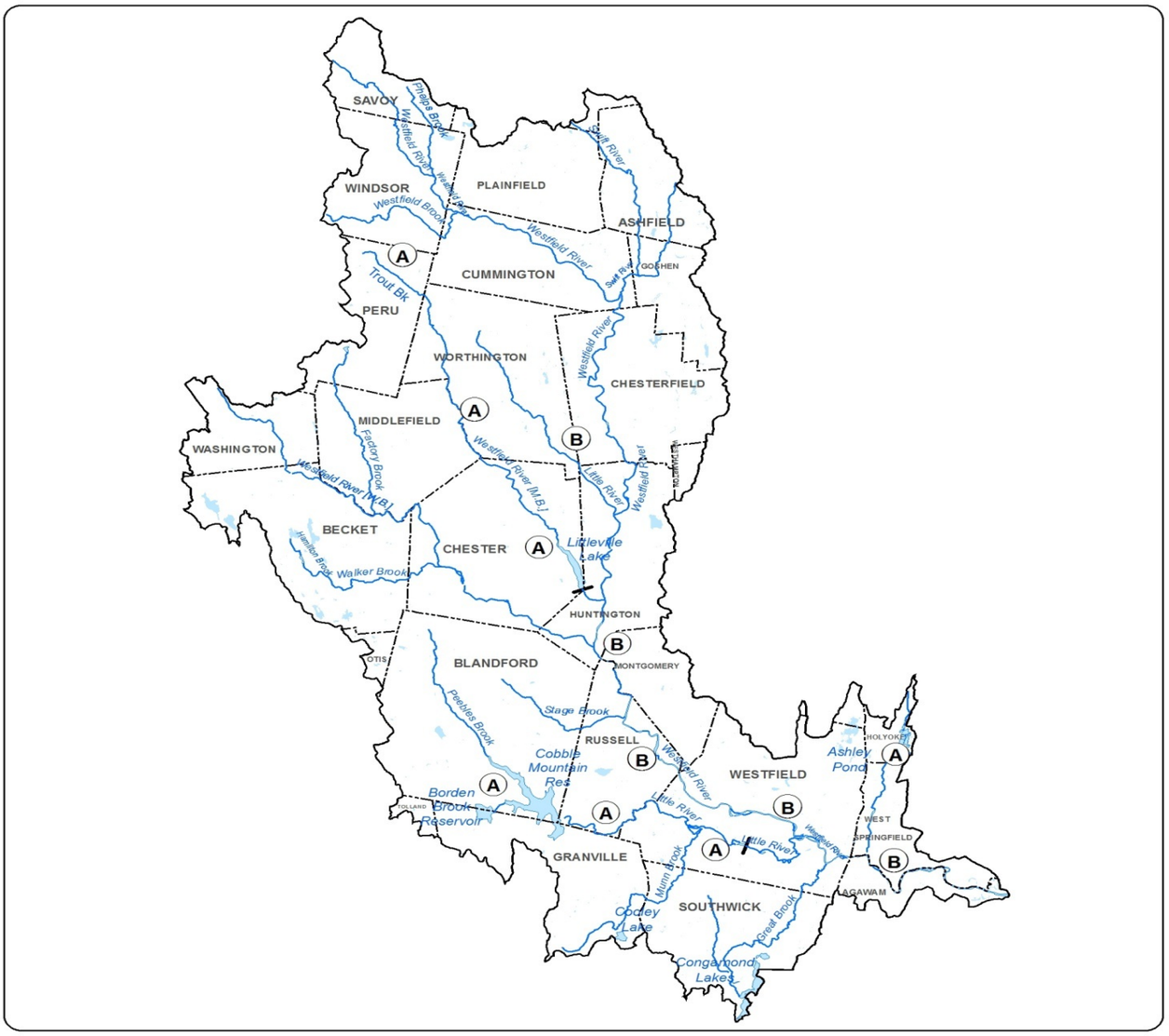
TABLE 26 TEN MILE RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Ten Mile River	Source to West Bacon Street, Plainville	23.1 - 19.9	B	Warm Water High Quality Water
	From West Bacon Street, Plainville to Whiting Pond Dam	19.9 - 19.3	B	Warm Water High Quality Water
	From Whiting Pond Dam to MA-RI state line	19.3 - 0.0	B	Warm Water
Bungay River	Entire length, North Attleborough/Attleboro	4.5 - 0.0	B	Warm Water
Speedway Brook (Thacher Brook)	Entire length, Attleboro	2.0 - 0.0	B	Warm Water
Orrs Pond (Sevenmile River, City Pond, Upper Pond, Orrs Reservoir)	Entire pond to outlet in Attleboro and those tributaries thereto		A	PWS ORW

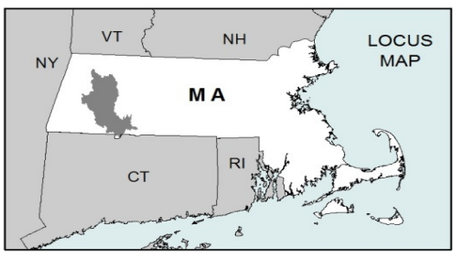
* Acronyms:
ORW = Outstanding Resource Water
PWS = Public Water Supply

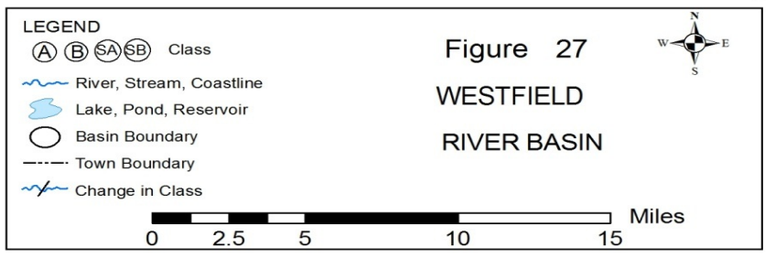
† Names cited in parentheses are unofficial, locally-used names

‡ Mile Point values represent the approximate distance in miles of each end of a given surface water or segment from its mouth (assigned a value of "0"). Mile Points are provided where available for convenience in locating the upstream and downstream ends of segments. Narrative descriptions of surface water or segment boundaries, however, always control over boundaries based upon Mile Points.

4.06: continued







4.06: continued

TABLE 27 WESTFIELD RIVER BASIN*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Middle Branch Westfield River	Source to Kinnebrook Road, Dayville	Above 3.0	A	Cold Water PWS ORW
	From Kinnebrook Road, Dayville to Littleville Dam, Chester/Huntington (inclusive of Littleville Lake) and those tributaries thereto	3.0 - 1.0	A	PWS ORW
	From outlet of Littleville Dam to confluence with the Westfield River	1.0 - 0.0	B	Warm Water High Quality Water
West Branch Westfield River	Source to Chester Center	17.5 - 7.5	B	Cold Water High Quality Water
	From Chester Center to confluence with the Westfield River	7.5 - 0.0	B	Cold Water
Westfield River	Source to confluence with the Middle Branch Westfield River (includes the former segment of river known locally as the Westfield River East Branch)	62.5 - 27.1	B	Cold Water High Quality Water
	From confluence with the Middle Branch Westfield River to confluence with the Connecticut River	27.1 - 0.0	B	Warm Water
Dead Branch (Brook)	From outlet of Long Pond to confluence with the Westfield River		B	Cold Water
Little River	From Cobble Mountain Reservoir Dam to hydroelectric dam (this river is a tributary to a PWS)		A	Cold Water PWS ORW
	From Hydroelectric dam to confluence with Westfield River		B	Cold Water
Long Pond (Long Pond Reservoir, Tucker Healy Pond, Lincoln Pond)	Source to outlet in Blandford and those tributaries thereto		A	PWS ORW
Unnamed Reservoir (Austin Brook Reservoir)	Entire reservoir to outlet in Chester and those tributaries thereto		A	PWS ORW
Horn Pond (Horn Pond Reservoir)	Entire pond to outlet in Becket and those tributaries thereto		A	PWS ORW
Huntington Reservoir (Cold Brook Reservoir)	Entire reservoir to outlet in Blandford and those tributaries thereto		A	PWS-Abandoned ORW

4.06: continued

TABLE 27 WESTFIELD RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Russell Reservoir (Lower Black Brook Reservoir)	Entire reservoir to outlet in Russell and those tributaries thereto		A	PWS ORW
Bearhole Reservoir (Bearhole Brook Reservoir, Prudys Pond)	Entire reservoir to outlet in West Springfield and those tributaries thereto		A	PWS ORW
Granville Reservoir	Entire reservoir to outlet in Granville and those tributaries thereto		A	PWS ORW
Cobble Mt. Reservoir	Entire reservoir to outlet in Russell and those tributaries thereto		A	PWS ORW
Intake Reservoir	Entire reservoir to outlet of hydroelectric dam in Russell and those tributaries thereto		A	PWS ORW
Unnamed Pond (Sedimentation Basin, Westfield Mountain Pond)	Entire pond northeast of the intersection of Gorge Road and Granville Road in Westfield and those tributaries thereto		A	PWS ORW
Ashley Reservoir (Ashley Pond, Wright Pond, Cedar Reservoir)	Entire reservoir to outlet in Holyoke and those tributaries thereto		A	PWS ORW
McLean Reservoir	Entire reservoir to outlet in Holyoke and those tributaries thereto		A	PWS ORW
Unnamed Reservoir (Upper Black Brook Reservoir)	Entire reservoir on Black Brook just west of Martin Phelps Road to outlet in Blandford and those tributaries thereto		A	PWS ORW
Abbott Brook	Entire length, Chester		B	Cold Water
Arm Brook	Source to inlet of unnamed impoundment upstream of Rte. 90 highway crossing, Southampton/ Westfield		B	Cold Water
Ashley Brook	Source to confluence with Jacks Brook, Westfield		B	Cold Water
Austin Brook	Source in Becket to the inlet of Unnamed Reservoir (Austin Brook Reservoir)		A	Cold Water PWS ORW
	From the outlet of Unnamed Reservoir (Austin Brook Reservoir) to confluence with Walker Brook, Chester		B	Cold Water

4.06: continued

TABLE 27 WESTFIELD RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Barry Brook	Entire length, Holyoke/West Springfield/Westfield		B	Cold Water
Bartlett Brook	Entire length, Plainfield/Cummington		B	Cold Water
Bearden Brook	Source in Montgomery to confluence with Westfield River, Montgomery		B	Cold Water
Blair Brook	Source in Chester to confluence with West Branch Westfield River, Chester		B	Cold Water
Bronson Brook	Entire length, Cummington/ Worthington		B	Cold Water
Bush Brook	Entire length, Westfield		B	Cold Water
Clear Brook	Source in Savoy to confluence with Windsor Jambs Brook, Windsor		B	Cold Water
Cone Brook	Source in Peru to confluence with Tuttle Brook, Peru (this brook is a tributary to a PWS)		A	Cold Water PWS ORW
Crow Brook	Source in Montgomery to confluence with Roaring Brook, Montgomery		B	Cold Water
Depot Brook	Entire length, Washington/Becket		B	Cold Water
Dickinson Brook	Entire length, Granville		B	Cold Water
Factory Brook	Entire length, Peru/Middlefield		B	Cold Water
Florida Brook	Source in Huntington to confluence with Westfield River, Huntington		B	Cold Water
Freeland Brook	Source in Blanford to confluence with Stage Brook, Russell		B	Cold Water
Fuller Brook	Entire length, Peru/Worthington		A	Cold Water PWS ORW
Geer Brook	Entire length, Peru/Middlefield		B	Cold Water
Hamilton Brook	Source in Becket to confluence with Walker Brook, Becket		B	Cold Water
Hollister Brook	Source in Granville to inlet of Granville Reservoir, Granville (this brook is a tributary to a PWS)		A	Cold Water PWS ORW
Horse Hill Brook	Source in Huntington to confluence with Roaring Brook, Huntington		B	Cold Water
Hume Brook	Source in Windsor to confluence with Westfield Brook, Windsor		B	Cold Water
Hundred Acre Brook	Source in Westfield to confluence with Little River, Westfield		B	Cold Water

4.06: continued

TABLE 27 WESTFIELD RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Kearney Brook	Entire length, Cummington/ Worthington		B	Cold Water
Kellog Brook	Entire length, Southwick/Westfield		B	Cold Water
Kinne Brook	Entire length, Worthington/Chester		A	Cold Water PWS ORW
Mica Mill Brook	Source in Chester to confluence with West Branch Westfield River, Chester		B	Cold Water
Mill Brook	Entire length in Plainfield/Cummington to confluence with the Westfield River		B	Cold Water
Miller Brook	Entire length, Agawam		B	Cold Water
Mongue Meadow Brook	Source in Windsor to confluence with Alder Meadow Brook, Windsor		B	Cold Water
Munn Brook	Entire length, Granville/Southwick/ Westfield		B	Cold Water
Otis Wait Brook	Source in Chester to confluence with West Branch Westfield River, Chester		B	Cold Water
Pittsinger Brook	Source in Huntington to confluence with Dead Branch Brook, Huntington		B	Cold Water
Pixley Brook	Source in Blandford to confluence with Peebles Brook, Blanford (this brook is a tributary to a PWS)		A	Cold Water PWS ORW
Pond Brook	Entire length, Huntington		B	Cold Water
Potash Brook	Entire length, Blandford/Russell		B	Cold Water
Powell Brook	Source in Cummington to confluence with Kearnery Brook, Cummington		B	Cold Water
Roaring Brook (1)	Entire length in Huntington/ Montgomery to confluence with the Westfield River		B	Cold Water
Roaring Brook (2)	Entire length in Chester/Huntington to confluence with the West Branch Westfield River		B	Cold Water
Shaker Mill Brook	Entire length, Washington/Becket		B	Cold Water
Shaw Brook	Entire length, Windsor		B	Cold Water
Skunk Brook	Source in Chester to confluence with Kinne Brook, Chester (this brook is a tributary to a PWS)		A	Cold Water PWS ORW
Smith Brook	Source to confluence with Middle Branch Westfield River, Chester (this brook is a tributary to a PWS)		A	Cold Water PWS ORW

4.06: continued

TABLE 27 WESTFIELD RIVER BASIN (continued)*				
Surface Water Name†	**Surface Water or Segment Boundary**	**Mile Point‡**	**Class**	**Qualifiers**
Sodum Brook	Source in Russell to confluence with Little River, Russell		B	Cold Water
Stage Brook	Entire length, Russell		B	Cold Water
Steep Bank Brook	Entire length, Windsor		B	Cold Water
Stones Brook	Entire length, Ashfield/Goshen		B	Cold Water
Swift River	Entire length, Hawley/Ashfield/ Goshen/Cummington		B	Cold Water
Swift River North Branch	Entire length, Plainfield/Ashfield/ Cummington		B	Cold Water
Sykes Brook	Source in Chester to confluence with Westfield River, Huntington		B	Cold Water
Tannery Brook	Source in Blanford to confluence with Bedlam Brook, Blandford (this brook is a tributary to a PWS)		A	Cold Water PWS ORW
Tower Brook	Entire length, Cummington/ Worthington/Chesterfield		B	Cold Water
Walker Brook	Entire length, Becket/Chester		B	Cold Water
West Branch (Brook)	Entire length, Worthington/Chesterfield		B	Cold Water
Westfield Brook	Entire length, Windsor/Cummington		B	Cold Water
White Brook	Entire length, Agawam		B	Cold Water
Whitmarsh Brook	Source in Cummington to confluence with Bronson Brook, Worthington		B	Cold Water
Wolf Brook	Source in Cummington to confluence with Westfield Brook, Cummington		B	Cold Water
Yokum Brook	Entire length, Becket		B	Cold Water

* Acronyms:
ORW = Outstanding Resource Water
PWS = Public Water Supply

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4.06: continued

(c) Table 28: Site-specific Criteria.

TABLE 28 SITE-SPECIFIC CRITERIA*				
Basin/Drainage Area	**Surface Water†**	**Boundary, Town or River Mile ‡**	**Site-specific Criteria**	
			Pollutant	**Criteria$^{\Pi}$**
Blackstone River Basin	Auburn Pond	Auburn	Total Phosphorus	0.025 mg/L
	Blackstone River	From the Upper Blackstone POTW discharge to the MA-RI state line (river mile 45.2 to 20.0)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Brierly Pond	Millbury	Total Phosphorus	0.025 mg/L
	Curtis Pond North	Worcester	Total Phosphorus	0.025 mg/L
	Curtis Pond South	Worcester	Total Phosphorus	0.025 mg/L
	Dorothy Pond	Millbury	Total Phosphorus	0.025 mg/L
	Eddy Pond	Auburn	Total Phosphorus	0.015 mg/L
	Flint Pond	Grafton, Worcester, Shrewsbury	Total Phosphorus	0.012 mg/L
	Green Hill Pond	Worcester	Total Phosphorus	0.025 mg/L
	Howe Reservoir (West Basin)	Millbury	Total Phosphorus	0.025 mg/L
	Indian Lake	Worcester	Total Phosphorus	0.027 mg/L
	Jordan Pond	Shrewsbury	Total Phosphorus	0.025 mg/L
	Lake Quinsigamond	Worcester, Shrewsbury	Total Phosphorus	0.012 mg/L
	Leesville Pond	Auburn, Worcester	Total Phosphorus	0.040 mg/L
	Mill Pond	Shrewsbury	Total Phosphorus	0.025 mg/L
	Mumford River	From the Douglas POTW discharge to confluence with the Blackstone River (river mile 9.0 to 0.0)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Newton Pond	Shrewsbury	Total Phosphorus	0.025 mg/L
	Pondville Pond	Auburn	Total Phosphorus	0.025 mg/L

4.06: continued

TABLE 28
SITE-SPECIFIC CRITERIA (continued)*

Basin/Drainage Area	Surface Water †	Boundary, Town or River Mile ‡	Site-specific Criteria	
			Pollutant	Criteria[Π]
Blackstone River Basin (cont.)	Salisbury Pond	Worcester	Total Phosphorus	0.0455 mg/L
	Shirley Pond	Shrewsbury	Total Phosphorus	0.025 mg/L
	Smiths Pond	Leicester	Total Phosphorus	0.020 mg/L
	Southwick Pond	Leicester	Total Phosphorus	0.010 mg/L
	Stoneville Pond	Auburn	Total Phosphorus	0.025 mg/L
	West River	From the Upton POTW discharge to confluence with Blackstone River (river mile 8.8 to 0.0)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
Buzzards Bay Coastal Drainage Area	Unnamed Brook	The unnamed brook located approximately ¼-mile northeast of and parallel to Aucoot Creek, from the Marion POTW discharge in Marion to confluence with Aucoot Cove (river mile 0.75 to 0.0)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
Cape Cod Coastal Drainage Area Stage Harbor System	Mill Pond	Chatham. Criterion applies at mid-channel of the outlet of Mill Pond (which is a part of the Mitchell River), approximately 350 meters upstream of Bridge Street Bridge (Lat. 41.67191; Long. -69.95974167). If criterion is met, it will also protect Little Mill Pond and Mitchell River.	Total Nitrogen	0.38 mg/L
	Oyster Pond	Chatham. Criterion applies at approximately mid-channel between Long Point and the point off the end of Woodcarver Knoll Road (Lat. 41.6787192; Long. -69.97749022). If criterion is met, it will also protect Stetson Cove, Oyster Pond River and Stage Harbor.	Total Nitrogen	0.38 mg/L
Cape Cod Coastal Drainage Area Sulphur Springs System	Harding Beach Pond (locally known as Sulphur Springs)	Chatham. Criterion applies at lower end of Harding Beach Pond in open water, near the outlet to Bucks Creek (Lat. 41.67365; Long. -70.00000278). If criterion is met, it will also protect Bucks Creek.	Total Nitrogen	0.38 mg/L
Cape Cod Coastal Drainage Area Taylors Pond System	Taylors Pond	Chatham. Criterion applies at the eastern side of the pond, approximately 60 meters from shore (Lat. 41.677769; Long. -70.016989). If criterion is met, it will also protect Mill Creek.	Total Nitrogen	0.38 mg/L

4.06: continued

TABLE 28
SITE-SPECIFIC CRITERIA (continued)*

Basin/Drainage Area	Surface Water†	Boundary, Town or River Mile ‡	Site-specific Criteria	
			Pollutant	Criteria[Π]
Cape Cod Coastal Drainage Area Bassing Harbor System	Ryder Cove (Inner and Outer Ryder Cove)	Chatham. Criterion applies at two locations: 50 meters from the eastern shore, adjacent to Woodland Way Circle (Lat. 41.708384; Long. -69.981777) and Mid-channel of Ryder Cove at narrows (adjacent to Rover Run Road) approximately 0.6 kilometers upstream of outlet to Bassing Harbor (Lat. 41.706554; Long. -69.973544). If criterion is met at these two locations, it will also protect Bassing Harbor, Crows Pond, and Frost Fish Creek.	Bioactive Nitrogen[3]	0.160 mg/L
Cape Cod Coastal Drainage Area Muddy Creek System	Muddy Creek	Outlet of small unnamed pond south of Countryside Drive and north-northeast of Old Queen Anne Road to mouth at Pleasant Bay, Chatham. Criterion applies at mid-channel, approximately 200 meters upstream of Orleans Road Bridge (Lat. 41.71109; Long. -69.99653472)	Bioactive Nitrogen[3]	0.210 mg/L
Charles River Basin	Charles River	From Dilla Street, Milford to Milford POTW discharge (river mile 75.8 - 72.7)	Dissolved Oxygen	≥5.0 mg/L at least 16 hours of any 24-hour period and ≥ 3.0 mg/L at any time.
			Temperature	≤85°F (29.4°C) and ≤5°F (2.8°C) rise due to a discharge.[4]
	Charles River	From the Milford POTW discharge to the Watertown Dam (river mile 73.4 to 9.8)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Stop River	to confluence with Charles River (river mile 4.4 to 0.0)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
Chicopee River Basin	Browning Pond	Oakham	Total Phosphorus	0.015 mg/L
	Long Pond	Springfield	Total Phosphorus	0.030 mg/L
	Mona Lake	Springfield	Total Phosphorus	0.030 mg/L
	Minechoag Pond	Ludlow	Total Phosphorus	0.030 mg/L
	Spectacle Pond	Wilbraham	Total Phosphorus	0.020 mg/L
	Sugden Reservoir	Spencer	Total Phosphorus	0.015 mg/L
	Wickaboag Pond	West Brookfield	Total Phosphorus	0.015 mg/L
Connecticut River Basin	Aldrich Lake East	Granby	Total Phosphorus	0.030 mg/L
	Aldrich Lake West	Granby	Total Phosphorus	0.030 mg/L

4.06: continued

TABLE 28
SITE-SPECIFIC CRITERIA (continued)*

Basin/Drainage Area	Surface Water†	Boundary, Town or River Mile‡	Site-specific Criteria	
			Pollutant	Criteria[Π]
Connecticut River Basin (cont.)	Bachelor Brook	River mile 12.4 to 0.0 (its mouth at the confluence with Connecticut River, South Hadley)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Lake Warner	Hadley	Total Phosphorus	0.030 mg/L
	Lake Wyola	Shutesbury	Total Phosphorus	0.015 mg/L
	Leverett Pond	Leverett	Total Phosphorus	0.015 mg/L
	Loon Pond	Springfield	Total Phosphorus	0.030 mg/L
French River Basin	Buffumville Lake	Charlton	Total Phosphorus	0.015 mg/L
	Cedar Meadow Pond	Leicester	Total Phosphorus	0.015 mg/L
	Dresser Hill Pond	Charlton	Total Phosphorus	0.035 mg/L
	Dutton Pond	Leicester	Total Phosphorus	0.025 mg/L
	Gore Pond	Charlton, Dudley	Total Phosphorus	0.014 mg/L
	French River	River mile 27.3 to 7.0 (at the MA-CT state line, Dudley/Webster)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Granite Reservoir	Charlton	Total Phosphorus	0.015 mg/L
	Greenville Pond	Leicester	Total Phosphorus	0.025 mg/L
	Hudson Pond	Oxford	Total Phosphorus	0.015 mg/L
	Jones Pond	Charlton, Spencer	Total Phosphorus	0.015 mg/L
	Larner Pond	Dudley	Total Phosphorus	0.014 mg/L
	Lowes Pond	Oxford	Total Phosphorus	0.015 mg/L
	McKinstry Pond	Oxford	Total Phosphorus	0.015 mg/L
	New Pond	Dudley	Total Phosphorus	0.014 mg/L
	Peter Pond	Dudley	Total Phosphorus	0.010 mg/L
	Pikes Pond	Charlton	Total Phosphorus	0.015 mg/L
	Robinson Pond	Oxford	Total Phosphorus	0.012 mg/L
	Rochdale Pond	Leicester	Total Phosphorus	0.025 mg/L
	Shepherd Pond	Dudley	Total Phosphorus	0.014 mg/L
	Texas Pond	Oxford	Total Phosphorus	0.025 mg/L
	Tobins Pond (Mosquito Pond)	Dudley	Total Phosphorus	0.014 mg/L

4.06: continued

TABLE 28
SITE-SPECIFIC CRITERIA (continued)*

Basin/Drainage Area	Surface Water†	Boundary, Town or River Mile‡	Site-specific Criteria	
			Pollutant	Criteria[Π]
French River Basin (cont.)	Wallis Pond	Dudley	Total Phosphorus	0.014 mg/L
Hudson River Basin	Hoosic River (South Branch Hoosic River)	From Adams POTW discharge to confluence with the North Branch Hoosic River, North Adams (river mile 15.4 to 10.3)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
Housatonic River Basin	Housatonic River	From Pittsfield POTW discharge to the MA-CT state line, Sheffield (river mile 50.9 to 0.0)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
Ipswich River Basin	Unnamed tributary (Greenwood Creek)	From Ipswich POTW discharge to confluence with the Ipswich River, Ipswich (river mile 0.7 to 0.0)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
Millers River Basin	Beaver Flowage Pond	Royalston	Total Phosphorus	0.0125 mg/L
	Bents Pond	Gardner	Total Phosphorus	0.015 mg/L
	Bourne-Hadley Pond	Templeton	Total Phosphorus	0.015 mg/L
	Brazell Pond	Templeton	Total Phosphorus	0.015 mg/L
	Cowee Pond	Gardner	Total Phosphorus	0.0127 mg/L
	Davenport Pond	Petersham, Athol	Total Phosphorus	0.0127 mg/L
	Depot Pond	Templeton	Total Phosphorus	0.015 mg/L
	Ellis Pond	Athol	Total Phosphorus	0.015 mg/L
	Greenwood Pond	Templeton	Total Phosphorus	0.015 mg/L
	Greenwood Pond	Westminster	Total Phosphorus	0.0139 mg/L
	Hilchey Pond	Gardner	Total Phosphorus	0.019 mg/L
	Lake Denison	Winchendon	Total Phosphorus	0.015 mg/L
	Lake Monomonac	Winchendon	Total Phosphorus	0.0133 mg/L
	Lower Naukeag Lake	Ashburnham	Total Phosphorus	0.0145 mg/L
	Minott Pond	Westminster	Total Phosphorus	0.015 mg/L
	Minott Pond South	Westminster	Total Phosphorus	0.011 mg/L
	Otter River	Source to Gardner POTW discharge (river mile 12.2 to 9.7)	Dissolved Oxygen	≥5.0 mg/L at least 16 hours of any 24-hour period and ≥3.0 mg/L at any time.
			Temperature	≤85°F (29.4°C) and ≤5°F (2.8°C) rise due to a discharge.[4]
	Parker Pond	Gardner	Total Phosphorus	0.015 mg/L
	Ramsdall Pond	Gardner	Total Phosphorus	0.015 mg/L

4.06: continued

TABLE 28
SITE-SPECIFIC CRITERIA (continued)*

Basin/Drainage Area	Surface Water†	Boundary, Town or River Mile‡	Site-specific Criteria	
			Pollutant	Criteria[Π]
Millers River Basin (cont.)	Reservoir No. 1	Athol	Total Phosphorus	0.015 mg/L
	Reservoir No. 2	Phillipston, Athol	Total Phosphorus	0.0051 mg/L
	Riceville Pond	Petersham, Athol	Total Phosphorus	0.015 mg/L
	South Athol Pond	Athol	Total Phosphorus	0.015 mg/L
	Stoddard Pond	Winchendon	Total Phosphorus	0.015 mg/L
	Wallace Pond	Ashburnham	Total Phosphorus	0.0137 mg/L
	Ward Pond	Athol	Total Phosphorus	0.015 mg/L
	Whites Mill Pond	Winchendon	Total Phosphorus	0.015 mg/L
	Whitney Pond	Winchendon	Total Phosphorus	0.015 mg/L
	Wrights Reservoir	Gardner, Westminster	Total Phosphorus	0.0135 mg/L
Nashua River Basin	Bare Hill Pond	Harvard	Total Phosphorus	0.030 mg/L
	North Nashua River	River mile 36.5 to 0.0 (its mouth at the confluence with the Nashua River, Lancaster)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Nashua River (South Branch)	The portion of the Nashua River from its confluence with the North Branch Nashua River, Lancaster, to 3.3 miles upstream, Clinton	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Squannacook River	From 500 feet downstream of the outlet of the Squannacook River Reservoir Dam to confluence with the Nashua River, Shirley/Groton (river mile 3.3 to 0.0)	Zinc	Acute[1]: 167.2 µg/L Chronic[2]: 168.6 µg/L
Quinebaug River Basin	Cady Brook	From the Charlton POTW discharge to confluence with the Quinebaug River, Southbridge (river mile 5.1 to 0.0)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Quinebaug River	River mile 19.7 to 7.9 (at the MA-CT state line, Dudley)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
South Coastal Drainage Area	French Stream	River mile 3.3 to 0.0 (its mouth at the confluence with the Drinkwater River, Hanover)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L

4.06: continued

TABLE 28
SITE-SPECIFIC CRITERIA (continued)*

Basin/Drainage Area	Surface Water†	Boundary, Town or River Mile‡	Site-specific Criteria	
			Pollutant	Criteria[Π]
Suasco River Basin	Assabet River	River mile 30.4 to 0.0 (its mouth at the confluence with the Sudbury River, Concord)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Lake Boon	Hudson, Stow	Total Phosphorus	0.020 mg/L
	Sudbury River	From outlet of Saxonville Pond to confluence with the Assabet River forming the headwaters of the Concord River (river mile 16.2 to 0.00)	Dissolved Oxygen	≥5.0 mg/L at least 16 hours of any 24-hour period and ≥3.0 mg/L at any time.
			Temperature	≤85°F (29.4°C) and ≤5°F (2.8°C) rise due to a discharge.[4]
Taunton River Basin	Nemasket River	River mile 5.5 to 0.0 (its mouth at the confluence with the Taunton River, Middleborough)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Salisbury Plain River	River mile 2.0 to 0.0 (its mouth at the confluence with Beaver Brook, both surface waters forming the headwaters of the Matfield River, East Bridgewater)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Three Mile River	River mile 6.0 to 0.0 (its mouth at the confluence with the Taunton River, Dighton/Taunton)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
	Town River	River mile 2.2 to 0.0 (its mouth at the confluence with the Matfield River, both surface waters forming the headwaters of the Taunton River, Bridgewater)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
Ten Mile River Basin	Ten Mile River	River mile 14.0 to 0.0 (at the MA-RI state line, Seekonk)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L
Westfield River Basin	Westfield River	River mile 10.8 to 0.0 (its mouth at the confluence with the Connecticut River)	Copper	Acute[1]: 25.7 µg/L Chronic[2]: 18.1 µg/L

* Acronyms:
MWRA = Massachusetts Water Resources Authority
POTW = Publicly-Owned Treatment Works

† Names cited in parentheses are unofficial, locally-used names.

‡ A River Mile is a linear measurement that begins at the mouth of the river ("0.0"), and increases in an upstream direction along its path.

Π Copper and zinc criteria are dissolved concentrations.

[1] The average ambient surface water pollutant concentration over any 1-hour period shall not exceed the acute criterion (Criterion Maximum Concentration or CMC) more than once during any three year period.

[2] The average ambient surface water pollutant concentration over any 4-day period shall not exceed the chronic criterion (Criterion Continuous Concentration or CCC) more than once during any three year period.

[3] Bioactive Nitrogen consists of ammonia, nitrate, nitrite, and particulate organic nitrogen (composed primarily of live and dead phytoplankton).

[4] Temperature standards for Class B waters at 314 CMR 4.05(3)(b)2.b. - d. also apply.

(d) Table 29: Generally Applicable Criteria

TABLE 29: GENERALLY APPLICABLE CRITERIA

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[II]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC [‡] µg/L**	
Acrolein	107028	P	3 Standard CMC Frequency & Duration	3 Standard CCC Frequency & Duration	--	--	
Aesthetics			*See* 314 CMR 4.05(5)(a): *Aesthetics*				
Aldrin	309002	P	1.5 Standard CMC Frequency & Duration	--	0.65 Standard CMC Frequency & Duration	--	
Alkalinity			--	20,000 Where the background condition of alkalinity is lower than this value, the criterion cannot be lower than 25% of the background level.	--	--	

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	FRESH WATER		COASTAL AND MARINE		NOTES
			CRITERION MAXIMUM CONCENTRATION (CMC)† µg/L	CRITERION CONTINUOUS CONCENTRATION (CCC)‡ µg/L	CMC† µg/L	CCC‡ µg/L	
Aluminum	7429905		the default concentration for the applicable watershed specified in Appendix A or the calculated concentration using the Aluminum Criteria Calculator V.2.0 as set forth in Appendix D However the criterion is determined, the Standard CMC Frequency & Duration applies.	the default concentration for the applicable watershed specified in Appendix A or the calculated concentration using the Aluminum Criteria Calculator V.2.0 as set forth in Appendix D However the criterion is determined, the Standard CCC Frequency & Duration applies.	--	--	1. Criteria are expressed as total recoverable metal in the water column.[1] 2. The Aluminum Criteria Calculator V.2.0, as more specifically described in Appendix D, is a model used to calculate Fresh Water site-dependent instantaneous criteria values for aluminum. When using this model, the input parameters for each calculation shall consist of a concurrently collected set of pH, hardness and dissolved organic carbon (DOC) data, for the relevant location.[2] 3. If applicable default criteria are available in Appendix A and instantaneous criteria values are calculated using the Aluminum Criteria Calculator V.2.0 for Fresh Water for a relevant location, the values calculated using the Aluminum Criteria Calculator V.2.0 shall be used.

[1] The default criteria concentrations were derived using EPA's Final Aquatic Life Ambient Water Quality Criteria for Aluminum 2018 (EPA-822-R-18-001).

[2] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	CAS NUMBER*	PRIORITY (P)[Π]	FRESH WATER		COASTAL AND MARINE		NOTES
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L	CMC[†] µg/L	CCC[‡] µg/L	
Ammonia	7664417		the concentration determined using Tables 5a or 5b, as applicable, of EPA's "Aquatic Life Ambient Water Quality Criteria for Ammonia - Freshwater - 2013", EPA 822-R-18-002 (Ammonia Criteria, 2013)[3,4] or the calculated concentration using the applicable equation provided in Appendix B However the criterion is determined, the Standard CMC Frequency & Duration applies	the concentration determined using Table 6 of EPA's Ammonia Criteria, 2013[3,4] or the calculated concentration using the applicable equation provided in Appendix B However the criterion is determined, the average ambient surface water concentration over any 30-day period shall not exceed the criterion more than once during any three year period and the average concentration over any four-day period within those 30 days is not to exceed 2.5 times the criterion.	0.233 mg/L (as un-ionized (NH_3) ammonia) or the concentration of total ammonia ($NH_3 + NH_4+$) as provided in Table 2 of EPA's "Ambient Water Quality Criteria for Ammonia (Saltwater) - 1989", EPA 440/5-88-004 (Ammonia Criteria, 1989)[3] However the criterion is determined, the Standard CMC Frequency & Duration applies	0.035 mg/L (as un-ionized (NH_3) ammonia) or the concentration of total ammonia ($NH_3 + NH_4+$), as provided in Table 3 of EPA's Ammonia Criteria, 1989[3] However the criterion is determined, the Standard CCC Frequency & Duration applies	1. Fresh Water Criteria are expressed as total ammonia nitrogen (TAN). 2. Fresh Water criteria derivation requires collection of a set of pH and temperature measurements for the relevant location.[5] 3. Coastal and Marine criteria derivation using Table 2 or 3 of EPA's Ammonia Criteria, 1989 document requires collection of a set of pH, temperature and salinity measurements for the relevant location.[5] 4. Conversion of Coastal and Marine un-ionized ammonia concentrations to total ammonia may be performed using the procedure described in the introduction to EPA's Ammonia Criteria, 1989, document.

[3] The EPA publication may be located by searching by its EPA document number on MassDEP's website.

[4] The following are examples of ammonia criteria calculated using a pH of 7.0 and a temperature of 20°C: CMC = 17 mg/L, CCC = 1.9 mg/L.

[5] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
			FRESH WATER		COASTAL AND MARINE		
POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L	CMC[†] µg/L	CCC[‡] µg/L	NOTES
Arsenic	7440382		340 Standard CMC Frequency & Duration	150 Standard CCC Frequency & Duration	69 Standard CMC Frequency & Duration	36 Standard CCC Frequency & Duration	1. These criteria are expressed as total recoverable concentrations. 2. Criteria may be adjusted using the water effects ratio (WER) procedure as described in Appendix E.
Bottom Pollutants or Alterations			*See* 314 CMR 4.05(5)(b): *Bottom Pollutants or Alterations*				

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER ***	**PRIORITY (P)[Π]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC[‡] µg/L**	
Cadmium	7440439	P	the calculated concentration using the hardness-dependent equation as provided in Appendix C[6] Standard CMC Frequency & Duration	the calculated concentration using the hardness-dependent equation as provided in Appendix C[6] Standard CCC Frequency & Duration	33 Standard CMC Frequency & Duration	7.9 Standard CCC Frequency & Duration	1. These criteria are expressed as dissolved metal in the water column. 2. Hardness-dependent equations are used to develop the Fresh Water criteria for cadmium. The input parameters for each calculation using these equations shall consist of ambient surface water data for hardness, collected for the relevant location, and other parameters as provided in Appendix C. 3. In certain contexts, use of a criterion may require applying a conversion factor to translate dissolved concentrations to total recoverable metal concentrations, or vice versa. Conversion factors for specified metals and the method for their application are set forth in Appendix F. 4. Criteria may be adjusted using the water effects ratio (WER) as described in Appendix E.

[6] The following are examples of cadmium criteria calculated using a hardness of 25 mg/L as $CaCO_3$: CMC = 0.49 µg/L and CCC = 0.09 µg/L.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	CAS NUMBER*	PRIORITY (P)[Π]	FRESH WATER		COASTAL AND MARINE		NOTES
			CRITERION MAXIMUM CONCENTRATION (CMC) µg/L	CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L	CMC[†] µg/L	CCC[‡] µg/L	
Carbaryl	63252		2.1 Standard CMC Frequency & Duration	2.1 Standard CCC Frequency & Duration	1.6 Standard CMC Frequency & Duration	--	
Chlordane	57749	P	1.2[7] Standard CMC Frequency & Duration	0.0043[8] Standard CCC Frequency & Duration	0.045[7] Standard CMC Frequency & Duration	0.004[8] Standard CCC Frequency & Duration	
Chloride	16887006		860,000 Standard CMC Frequency & Duration	230,000 Standard CCC Frequency & Duration	--	--	
Chlorine	7782505		19 Standard CMC Frequency & Duration	11 Standard CCC Frequency & Duration	13 Standard CMC Frequency & Duration	7.5 Standard CCC Frequency & Duration	
Chlorpyrifos	2921882		0.083 Standard CMC Frequency & Duration	0.041 Standard CCC Frequency & Duration	0.011 Standard CMC Frequency & Duration	0.0056 Standard CCC Frequency & Duration	

[7] The 1980 EPA CMC criterion was divided by 2 to obtain values more comparable to derivations using the 1985 EPA Guidelines.

[8] The CCCs are based on the Final Residue Value (FRV) procedure.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[II]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC[‡] µg/L**	
Chromium (III)	16065831	P	the calculated concentration using the hardness-dependent equation as provided in Appendix C[9] Standard CMC Frequency & Duration	the calculated concentration using the hardness-dependent equation as provided in Appendix C[9] Standard CCC Frequency & Duration	--	--	1. These criteria are expressed as dissolved metal in the water column. 2. Hardness-dependent equations are used to develop the Fresh Water criteria for chromium (III). The input parameters for each calculation using these equations shall consist of ambient surface water data for hardness, collected for the relevant location, and other parameters as provided in Appendix C. 3. In certain contexts, use of a criterion may require applying a conversion factor to translate dissolved concentrations to total recoverable metal concentrations, or vice versa. Conversion factors for specified metals and the method for their application are set forth in Appendix F. 4. Criteria may be adjusted using the water effects ratio (WER) procedure as described in Appendix E.

[9] The following are examples of chromium (III) criteria calculated using a hardness of 25 mg/L as $CaCO_3$: CMC = 183 µg/L and CCC = 24 µg/L.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[II]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC3[†] µg/L**	**CCC[‡] µg/L**	
Chromium (VI)	18540299	P	16 Standard CMC Frequency & Duration	11 Standard CCC Frequency & Duration	1,100 Standard CMC Frequency & Duration	50 Standard CCC Frequency & Duration	1. These criteria are expressed as dissolved metal in the water column. 2. In certain contexts, use of a criterion may require applying a conversion factor to translate dissolved concentrations to total recoverable concentrations, or vice versa. Conversion factors for specified metals and the method for their application are set forth in Appendix F. 3. Criteria may be adjusted using the water effects ratio (WER) as described in Appendix E.
Color and Turbidity			*See* 314 CMR 4.05(3) and (4)				

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
			FRESH WATER		COASTAL AND MARINE		
POLLUTANT	CAS NUMBER *	PRIORITY (P)[II]	CRITERION MAXIMUM CONCENTRATION (CMC) µg/L	CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L	CMC[†] µg/L	CCC[‡] µg/L	NOTES
Copper	7440508	P	the default calculated concentration using the hardness-dependent equation as set forth in Appendix C or the calculated concentration using the Biotic Ligand Model (BLM) as set forth in Appendix D However the criterion is determined, the Standard CMC Frequency & Duration applies	the default calculated concentration using the hardness-dependent equation as set forth in Appendix C or the calculated concentration using the BLM as set forth in Appendix D However the criterion is determined, the Standard CCC Frequency & Duration applies	4.8[10] Standard CMC Frequency & Duration	3.1[10] Standard CCC Frequency & Duration	1. These criteria are expressed as dissolved metal in the water column. 2. Hardness-dependent equations are used to calculate the Fresh Water criteria values for copper. The input parameters for each calculation using these equations shall consist of ambient surface water data for hardness, collected for the relevant location, and other parameters as provided in Appendix C.[11] 3. The BLM is a model used to calculate Fresh Water site-dependent instantaneous criteria values for copper. The input parameters for each criteria calculation using the copper BLM shall consist of a set of pH, DOC, alkalinity, temperature, calcium, magnesium, sodium, potassium, sulfate, and chloride data, for the relevant location.[11] 4. If both hardness-dependent and BLM instantaneous criteria values for Fresh Water are calculated or are able to be calculated for a relevant location, the values calculated using the BLM shall be used. 5. In certain contexts, use of a criterion may require applying a conversion factor to translate dissolved concentrations to total recoverable concentrations, or vice versa. Conversion factors for specified metals and the method for their application are set forth in Appendix F.

[10] Criteria may be adjusted using the water effects ratio (WER) procedure as described in Appendix E.

[11] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[Π]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC[‡] µg/L**	
Cyanide	57125	P	22 Standard CMC Frequency & Duration	5.2 Standard CCC Frequency & Duration	1 Standard CMC Frequency & Duration	1 Standard CCC Frequency & Duration	These criteria are expressed as µg free cyanide (CN/L).
4,4'-DDT	50293	P	0.4[12] Standard CMC Frequency & Duration	0.001 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	0.07[12] Standard CMC Frequency & Duration	0.001 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	Each criterion applies to 4,4'-DDT and also applies to the combined total of 4,4'DDT and its metabolites (*i.e.*, TDE and DDE).
Demeton	8065483		--	0.1 Standard CCC Frequency & Duration	--	0.1 Standard CCC Frequency & Duration	
Diazinon	333415		0.17 Standard CMC Frequency & Duration	0.17 Standard CCC Frequency & Duration	0.82 Standard CMC Frequency & Duration	0.82 Standard CCC Frequency & Duration	

[12] The 1980 EPA CMC criterion was divided by 2 to obtain a value more comparable to derivations using the 1985 EPA Guidelines.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
			FRESH WATER		COASTAL AND MARINE		
POLLUTANT	CAS NUMBER*	PRIORITY (P)[Π]	CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L	CMC† µg/L	CCC[‡] µg/L	NOTES
Dieldrin	60571	P	0.12[13] Standard CMC Frequency & Duration	0.056[14] Standard CCC Frequency & Duration	0.36[13] Standard CMC Frequency & Duration	0.0019[14] The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	
alpha-Endosulfan beta-Endosulfan	959988 (*alpha)* 33213659 (*beta*)	P	0.11[13] Standard CMC Frequency & Duration	0.056 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	0.017[13] Standard CMC Frequency & Duration	0.0087 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	These criteria apply to the sum of alpha-endosulfan and beta-endosulfan.
Endrin	72208	P	0.086 Standard CMC Frequency & Duration	0.036[15] Standard CCC Frequency & Duration	0.018 Standard CMC Frequency & Duration	0.0023 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period	

[13] The 1980 EPA CMC criterion was divided by 2 to obtain values more comparable to derivations using the 1985 EPA Guidelines.
[14] The CCC did not consider exposure through the diet, which is probably important for aquatic life occupying upper trophic levels.
[15] The Fresh Water CCC did not consider exposure through the diet, which is probably important for aquatic life occupying upper trophic levels.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[II]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)† µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)‡ µg/L**	**CMC† µg/L**	**CCC ‡ µg/L**	
Gases, Total Dissolved	--		≤ 110% saturation	--	≤ 110% saturation	--	Criteria apply for gases at the existing atmospheric and hydrostatic pressures.
Guthion	86500		--	0.01[16] Standard CCC Frequency & Duration	--	0.01[16] Standard CCC Frequency & Duration	
Heptachlor	76448	P	0.3[17] Standard CMC Frequency & Duration	0.0038 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	0.03[17] Standard CMC Frequency & Duration	0.0036 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	
Heptachlor Epoxide	1024573	P	0.3[17] Standard CMC Frequency & Duration	0.0038 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	0.03[17] Standard CMC Frequency & Duration	0.0036 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	

[16] Criterion was developed using an 0.1 application factor applied to the 96-hour LC50.

[17] The 1980 EPA CMC criterion was divided by 2 to obtain values more comparable to derivations using the 1985 EPA Guidelines.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[II]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC[‡] µg/L**	
gamma-Hexachlorocyclohexane (also known as gamma-HCH, gamma-BHC, or Lindane)	58899	P	0.95 Standard CMC Frequency & Duration	--	0.08[18] Standard CMC Frequency & Duration	--	
Iron	7439896		--	1,000 Standard CCC Frequency & Duration	--	--	

[18] The 1980 EPA CMC criterion was divided by 2 to obtain values more comparable to derivations using the 1985 EPA Guidelines.

TABLE 29
GENERALLY APPLICABLE CRITERIA

29a: AQUATIC LIFE CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	FRESH WATER		COASTAL AND MARINE		NOTES
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L	CMC[†] µg/L	CCC[‡] µg/L	
Lead	7439921	P	the calculated concentration using the hardness-dependent equation as set forth in Appendix C[19] Standard CMC Frequency & Duration	the calculated concentration using the hardness-dependent equation as set forth in Appendix C[19] Standard CCC Frequency & Duration	210 Standard CMC Frequency & Duration	8.1 Standard CCC Frequency & Duration	1. Criteria are expressed as dissolved metal in the water column. 2. Hardness-dependent equations are used to develop the Fresh Water criteria for lead. The input parameters for each calculation using these equations shall consist of ambient surface water data for hardness, collected for the relevant location, and other parameters as provided in Appendix C.[20] 3. In certain contexts, use of a criterion may require applying a conversion factor to translate dissolved concentrations to total recoverable metal concentrations, or vice versa. Conversion factors for specified metals and the method for their application are set forth in Appendix F. 4. Criteria may be adjusted using the water effects ratio (WER) as described in Appendix E.

[19] The following are examples of lead criteria calculated using a hardness of 25 mg/L as $CaCO_3$: CMC = 14 µg/L and CCC = 0.54 µg/L.

[20] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and-model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	FRESH WATER		COASTAL AND MARINE		NOTES
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L	CMC[†] µg/L	CCC[‡] µg/L	
Malathion	121755		--	0.1 Standard CCC Frequency & Duration	--	0.1 Standard CCC Frequency & Duration	
Mercury	7439976	P	1.4 Standard CMC Frequency & Duration	0.77 Standard CCC Frequency & Duration	1.8 Standard CMC Frequency & Duration	0.94 Standard CCC Frequency & Duration	1. These criteria are expressed as dissolved metal in the water column. 2. Criteria may be adjusted using the water effects ratio (WER) as described in Footnote E.
Methoxychlor	72435		--	0.03 Standard CCC Frequency & Duration	--	0.03 Standard CCC Frequency & Duration	
Mirex	2385855		--	0.001 Standard CCC Frequency & Duration	--	0.001 Standard CCC Frequency & Duration	

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[II]**	**FRESH WATER**		**COASTAL & MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC[‡] µg/L**	
Nickel	7440020	P	the calculated concentration using the hardness-dependent equation as set forth in Appendix C[21] Standard CMC Frequency & Duration	the calculated concentration using the hardness-dependent equation as set forth in Appendix C[21] Standard CCC Frequency & Duration	74 Standard CMC Frequency & Duration	8.2 Standard CCC Frequency & Duration	1. Criteria are expressed as dissolved metal in the water column. 2. Hardness-dependent equations are used to develop the Fresh Water criteria for nickel. The input parameters for each calculation using these equations shall consist of ambient surface water data for hardness, collected for the relevant location, and other parameters as provided in Appendix C.[22] 3. In certain contexts, use of a criterion may require applying a conversion factor to translate dissolved concentrations to total recoverable metal concentrations, or vice versa. Conversion factors for specified metals and the method for their application are set forth in Appendix F. 4. Criteria may be adjusted using the water effects ratio (WER) as described in Appendix E.
Nonylphenol	84852153		28 Standard CMC Frequency & Duration	6.6 Standard CCC Frequency & Duration	7 Standard CMC Frequency & Duration	1.7 Standard CCC Frequency & Duration	
Nutrients	--		*See* 314 CMR 4.05(5)(c).: *Nutrient*s.				

[21] The following are examples of nickel criteria calculated using a hardness of 25 mg/L as $CaCO_3$: CMC = 140 µg/L and CCC = 16 µg/L.

[22] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[Π]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC[‡] µg/L**	
Oil and Grease	--		*See* 314 CMR 4.05(3) and (4)				
Oxygen, Dissolved	782447		*See* 314 CMR 4.05(3) and (4)				
Parathion	56382		0.065 Standard CMC Frequency & Duration	0.013 Standard CCC Frequency & Duration	--	--	
Pentachloro-phenol	87865	P	the calculated concentration using the equation as set forth in Note 1.a.[23] Standard CMC Frequency & Duration	the calculated concentration using the equation as set forth in Note 1.b.[23] Standard CCC Frequency & Duration	13 Standard CMC Frequency & Duration	7.9 Standard CCC Frequency & Duration	1. Two equations are used to develop the Fresh Water criteria for pentachlorophenol. The input parameter for each calculation using the equations shall consist of pH data for the relevant location.[24]. The equations used to calculate the criteria are as follows: a. CMC = exp(1.005(pH)-4.869); and b. CCC = exp(1.005(pH)-5.134).
pH	--		*See* 314 CMR 4.05(3) and (4)				
Phosphorus, Elemental (also known as "P4", "white phosphorus" and historically known as "yellow phosphorus")	7723140		--	--	--	0.1 Standard CCC Frequency & Duration	

[23] The following are examples of pentachlorophenol criteria corresponding to a pH of 7: CMC = 8.7 µg/L, CCC = 6.7 µg/L.

[24] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
Pollutant	**CAS Number***	**Priority (P)[Π]**	**Fresh Water**		**Coastal & Marine**		**NOTES**
			Criterion Maximum Concentration (CMC)[†] µg/L	**Criterion Continuous Concentration (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC[‡] µg/L**	
Polychlorinated Biphenyls (PCBs)		P	--	0.014 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	--	0.03 The average ambient surface water concentration over any 24-hour period shall not exceed the criterion more than once during any three year period.	These criteria apply to total PCBs (the sum of all homolog, all isomer, all congener, or all Aroclor analyses).
Radioactivity			*See* 314 CMR 4.05(5)(d): *Radioactivity*				

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[Π]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC[‡] µg/L**	
Selenium	7782492	P	the calculated concentration using the equation as set forth in Note 3 Standard CMC Frequency & Duration	5.0 Standard CCC Frequency & Duration	290 Standard CMC Frequency & Duration	71[25] Standard CCC Frequency & Duration	1. Fresh Water criteria are expressed as total recoverable metal in the water column. 2. Coastal and Marine criteria are expressed as dissolved metal in the water column. 3. The freshwater CMC selenium equation is used to develop the criterion for selenium. The CMC equation is the following: 1/[(f1/CMC1) + (f2/CMC2)], where f1 and f2 are the fractions of total selenium as selenite and selenate, respectively, and CMC1 = 185.9 µg/L and CMC2 =12.82 µg/L. The input parameters for each calculation using this equation shall consist of data for the fractions of total selenium as selenite and selenate, collected for the relevant location.[26] 4. In certain contexts, use of a criterion may require applying a conversion factor to translate dissolved concentrations to total recoverable metal concentrations, or vice versa. Conversion factors for specified metals and the method for their application are set forth in Appendix F.

[25] The CCC does not take into account uptake *via* the food chain; therefore, it is recommended that the status of the fish community be monitored whenever the concentration of selenium exceeds 5.0 µg/L.

[26] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[II]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)[†] µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)[‡] µg/L**	**CMC[†] µg/L**	**CCC[‡] µg/L**	
Silver	7440224	P	the calculated concentration using the hardness-based equation as set forth in Appendix C[27] Standard CMC Frequency & Duration	--	0.95[28] Standard CMC Frequency & Duration	--	1. These criteria are expressed as dissolved metal in the water column. 2. The hardness-dependent equation is used to develop the Fresh Water criterion for silver. The input parameters for the calculation using this equation shall consist of ambient surface water data for hardness, collected for the relevant location, and other parameters as provided in Appendix C.[29] 3. In certain contexts, use of a criterion may require applying a conversion factor to translate dissolved concentrations to total recoverable metal concentrations, or vice versa. Conversion factors for specified metals and the method for their application are set forth in Appendix F. 4. Criteria may be adjusted using the water effects ratio (WER) as described in Appendix E.
Solids and Turbidity	--		*See* 314 CMR 4.05(3) and (4)				

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[27] The following is an example of a silver criterion applying a hardness of 25 mg/L as $CaCO_3$: CMC = 0.30 µg/L.

[28] The 1980 EPA CMC criterion was divided by 2 to obtain a value more comparable to derivations using the 1985 EPA Guidelines.

[29] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[II]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)† µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)‡ µg/L**	**CMC† µg/L**	**CCC‡ µg/L**	
Sulfide-Hydrogen Sulfide	7783064		--	2.0 Standard CCC Frequency & Duration	--	2.0 Standard CCC Frequency & Duration	
Taste and Odor	--		*See* 314 CMR 4.05(3) and (4)				
Temperature	--		*See* 314 CMR 4.05(3) and (4)				
Toxaphene	8001352	P	0.73 Standard CMC Frequency & Duration	0.0002 Standard CCC Frequency & Duration	0.21 Standard CMC Frequency & Duration	0.0002 Standard CCC Frequency & Duration	
Tributyltin (TBT)	--		0.46 Standard CMC Frequency & Duration	0.072 Standard CCC Frequency & Duration	0.42 Standard CMC Frequency & Duration	0.0074 Standard CCC Frequency & Duration	

TABLE 29: GENERALLY APPLICABLE CRITERIA (continued)

29a: AQUATIC LIFE CRITERIA**							
POLLUTANT	**CAS NUMBER†**	**PRIORITY (P)[II]**	**FRESH WATER**		**COASTAL AND MARINE**		**NOTES**
			CRITERION MAXIMUM CONCENTRATION (CMC)† µg/L	**CRITERION CONTINUOUS CONCENTRATION (CCC)‡ µg/L**	**CMC† µg/L**	**CCC‡ µg/L**	
Zinc	7440666	P	the calculated concentration using the applicable hardness-dependent equation as set forth in Appendix C[30] Standard CMC Frequency & Duration	the calculated concentration using the applicable hardness-dependent equation as set forth in Appendix C[30] Standard CCC Frequency & Duration	90 Standard CMC Frequency & Duration	81 Standard CCC Frequency & Duration	1. Criteria are expressed as dissolved metal in the water column. 2. Hardness-dependent equations are used to develop the Fresh Water criteria for zinc. The input parameters for each calculation using these equations shall consist of ambient surface water data for hardness, collected for the relevant location, and other parameters as provided in Appendix C.[31] 3. In certain contexts, use of a criterion may require applying a conversion factor to translate dissolved concentrations to total recoverable metal concentrations, or vice versa. Conversion factors for specified metals and the method for their application are set forth in Appendix F. 4. Criteria may be adjusted using the water effects ratio (WER) as described in Appendix E.

[30] The following are examples of zinc criteria applying a hardness of 25 mg/L as $CaCO_3$: CMC = 36 µg/L and CCC = 37 µg/L.

[31] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

** For a particular surface water or segment, to determine the applicable aquatic life criteria in 314 CMR 4.00, either fresh water or coastal and marine criteria, see 314 CMR 4.05(6). Where the criteria determination in 314 CMR 4.05(6) conflicts with the designated class for such surface water or segment, the determination from 314 CMR 4.05(6) shall control.

* Chemical Abstracts Service (CAS) Numbers, which are maintained in the CAS registry, are unique numeric identifiers for chemical substances. CAS is a division of the American Chemical Society.

[II] The Priority Pollutants are a subset of toxic pollutants for which EPA has published analytical test methods. The list of Priority Pollutants are published at 40 CFR Part 423, Appendix A.

† Unless otherwise noted, the average ambient surface water pollutant concentration over any 1-hour period shall not exceed the CMC more than once during any three year period ("Standard CMC Frequency & Duration").

‡ Unless otherwise noted, the average ambient surface water pollutant concentration over any 4-day period shall not exceed the CCC more than once during any three year period ("Standard CCC Frequency & Duration").

29a: AQUATIC LIFE CRITERIA

APPENDIX A: Default Fresh Water Aluminum Criteria by Watershed (River Basin or Coastal Drainage Area)

Default Fresh Water Aluminum Criteria by Watershed (River Basin or Coastal Drainage Area)†*		
River Basin or Coastal Drainage Area	**CMC† (Acute) µg/L**	**CCC† (Chronic) µg/L**
Blackstone	532	262
Boston Harbor/Charles	978	380
Buzzards Bay/Mt Hope Bay/Narragansett Bay/Ten Mile	451	230
Cape Cod Coastal[32]	--	--
Chicopee (5th percentile)	290	170
Connecticut (5th percentile)	600	290
Deerfield	440	220
Farmington/Westfield (5th percentile)	299	169
French/Quinebaug	570	270
Housatonic/Hudson	1400	515
Ipswich/North Coastal/Parker	932	396
Islands Coastal[32]	--	--
Merrimack/Shawsheen (5th percentile)	460	249
Millers	329	200
Nashua (5th percentile)	368	200
South Coastal	1200	460
Sudbury, Assabet, and Concord (SuAsCo)	940	394
Taunton (5th percentile)	300	190

† Defaults are based on 10th percentile criteria calculated from concurrent pH, DOC, and hardness data, except watersheds marked as 5th percentile to protect state and federal endangered species.

* Acronyms:
CCC = Criterion Continuous Concentration
CMC = Criterion Maximum Concentration

[32] Insufficient data are available to calculate watershed-based default criteria.

29a: AQUATIC LIFE CRITERIA

APPENDIX B: Calculation of Fresh Water Ammonia Criteria Values

Criteria for ammonia as total ammonia nitrogen (mg/L TAN) are pH- and temperature-dependent. Criteria are derived in accordance with the equations set forth below, where MIN indicates the lesser of the two values separated by a comma, MAX indicates the greater of the two values separated by a comma, and T is temperature in degrees Celsius. The criterion maximum concentration (CMC or acute) equations differ according to the presence or absence of fish in the family Salmonidae.

1. The CMC (acute) calculation:
   a. The following equation shall be used when Salmonidae species are present. Salmonidae species are presumed present in surface waters designated Cold Waters in 314 CMR 4.00; in MA Division of Fisheries and Wildlife's designated Cold Water Fisheries Resources (CFR); in surface waters where applicable data indicate the definition of a Cold Water Fishery is met ("Cold Water Fishery existing use"); and, as a rebuttable presumption, in any tributary to such designated Cold Waters, CFRs, or Cold Water Fishery existing uses:

$$CMC\ present = MIN\left(\left(\frac{0.275}{1+10^{7.204-pH}}+\frac{39.0}{1+10^{pH-7.204}}\right),\left(0.7249\ x\ \left(\frac{0.0114}{1+10^{7.204-pH}}+\frac{1.6181}{1+10^{pH-7.204}}\right)x\left(23.12\ x\ 10^{0.036\ x\ (20-T)}\right)\right)\right), \text{ or}$$

   b. The following equation shall be used when Salmonidae species are absent. Salmonidae species are presumed absent in surface waters designated Warm Waters in 314 CMR 4.00; and in surface waters that are not designated Cold Waters, CFRs or Cold Water Fishery existing uses, or tributary to such designated Cold Waters, CFRs or Cold Water Fishery existing uses:

$$CMC\ absent = 0.7249\ x\left(\frac{0.0114}{1+10^{7.204-pH}}+\frac{1.6181}{1+10^{pH-7.204}}\right)x\ MIN(51.93, 23.12\ x\ 10^{0.036\ x\ (20-T)})$$

2. The following Criterion Continuous Concentration (CCC or chronic) calculation shall be used in all surface waters:

$$CCC = 0.8876\ x\ \left(\frac{0.0278}{1+10^{7.688-pH}}+\frac{1.1994}{1+10^{pH-7.688}}\right)\ x\ (2.126\ x\ 10^{0.028\ x\ (20-MAX(T,7))})$$

29a: AQUATIC LIFE CRITERIA

APPENDIX C: Calculation of Hardness-Dependent Fresh Water Dissolved Metals Criteria Values*

1. Fresh Water criteria values for various ambient surface water hardness values shall be calculated using the following hardness-dependent equations:
   a. For CMC using the equation: CMC (dissolved) = $\exp\{m_A [\ln(\text{hardness})] + b_A\}$ (CF)
   b. For CCC using the equation: CCC (dissolved) = $\exp\{m_C [\ln(\text{hardness})] + b_C\}$ (CF)
2. The hardness parameter used in the foregoing equations shall be obtained from the ambient surface water for the relevant location[33], except that when the hardness is greater than 400 mg/L a default hardness of 400 mg/L may be used or, alternatively, the following procedures may be used:
   a. for all metals listed in the following table, with the exception of copper, the actual hardness in the applicable hardness-dependent equation, where the resultant criterion is then adjusted by a WER calculated in accordance with Appendix E; or
   b. for copper only, the Biotic Ligand Model (BLM) as set forth in Appendix D, in place of the hardness-dependent equations.
3. The other parameters used in the foregoing hardness-dependent equations shall be obtained from the applicable entries in the following table:

Parameters for Calculating Hardness-Dependent Fresh Water Dissolved Metals Criteria Values

Chemical	m_A	b_A	m_C	b_C	Conversion Factors	
					CMC	CCC
Cadmium[34]	0.9789	-3.866	0.7977	-3.909	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]
Chromium III	0.8190	3.7256	0.8190	0.6848	0.316	0.860
Copper	0.9422	-1.700	0.8545	-1.702	0.960	0.960
Lead[34]	1.273	-1.460	1.273	-4.705	1.46203-[(ln hardness)(0.145712)]	1.46203-[(ln hardness)(0.145712)]
Nickel	0.8460	2.255	0.8460	0.0584	0.998	0.997
Silver	1.72	-6.59	-	-	0.85	-
Zinc	0.8473	0.884	0.8473	0.884	0.978	0.986

* Acronyms:
CCC = Criterion Continuous Concentration; CF = Conversion Factors; CMC = Criterion Maximum Concentration

[33] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

[34] When an ambient hardness of less than 25 mg/L is used to establish criteria for cadmium or lead, if the calculated hardness-dependent Conversion Factor (CF) is greater than one, it shall default to one.

29a: AQUATIC LIFE CRITERIA

APPENDIX D: Model-Based Software for Calculating Fresh Water Aluminum and Copper Criteria Values [35]

1. Aluminum: As used in Table 29a at 314 CMR 4.06(6)(d), the term "Aluminum Criteria Calculator V.2.0" shall mean the software published by EPA for calculation of criteria values as described in EPA's "Final Aquatic Life Ambient Water Quality Criteria For Aluminum 2018" (EPA-822-R-18-001), referred to therein as the "Aluminum Criteria Calculator V.2.0". A copy of this software is available from MassDEP's website.

2. Copper: As used in Table 29a at 314 CMR 4.06(6)(d), the term "Biotic Ligand Model" (or "BLM") for copper shall mean version 2.2.3 of the software published by EPA for calculation of criteria values as described in EPA's "Aquatic Life Ambient Freshwater Quality Criteria - Copper, 2007 Revision" (EPA-822-R-07-001), referred to therein as the "copper biotic ligand model (BLM)". A copy of this software is available from MassDEP's website.

3. Software Updates: For purposes of Table 29a at 314 CMR 4.06(6)(d), the software referred to as the Aluminum Criteria Calculator V.2.0. and the copper BLM version 2.2.3, respectively, shall include any software updates which MassDEP may determine in writing are necessary or desirable for purposes of maintaining or improving compatibility with updated computer operating systems, usability, or computational efficiency; provided that:
   a. no such software update shall substantively alter the toxicity data or water quality criteria calculations used in such software;
   b. notice of all such written determinations and all such associated software updates shall be published on MassDEP's website, and shall also be made available upon request to MassDEP; and
   c. any software update that does not satisfy all of the requirements listed in Appendix D.3., shall only be implemented by amending this regulation.

[35] 314 CMR 4.05(5)(e)2.d. specifies required methods for data collection and calculation of equation- and model-based criteria values where discharge of a toxic pollutant requires a permit or approval. 314 CMR 4.03(1)(a) requires consideration of downstream uses when applying these criteria.

29a: AQUATIC LIFE CRITERIA

APPENDIX E: Adjustment of Criteria Using the WER (Specified Metals) or the Streamlined WER (Copper in Coastal and Marine Waters Only)

1. For specified metals (as noted in Table 29a at 314 CMR 4.06(6)(d)), criteria may be adjusted in accordance with the procedure published in EPA's "Interim Guidance on Determination and Use of Water-Effect Ratios for Metals, February 1994" (EPA-823-B-94-001) and as clarified and updated by EPA's Aquatic Life Guidelines Committee memo titled "Modifications to Guidance Site-Specific Criteria" dated December 3, 1997 (collectively, the WER). A workplan and/or sampling plan and quality assurance project plan (QAPP) is required for use of the WER and shall be subject to MassDEP's advance written approval.

2. For copper (as noted in Table 29a at 314 CMR 4.06(6)(d)) in coastal and marine waters only, the criteria may, in the alternative, be adjusted in accordance with the procedure published in EPA's "Streamlined Water-Effect Ratio Procedure for Discharges of Copper March 2001" (Streamlined WER, EPA-822-R-01-005), as applicable. The procedure applies to situations where most of the copper is from continuous point source effluents. A workplan and/or sampling plan and QAPP are required for the use of the Streamlined WER and shall be subject to MassDEP's advance written approval. The workplan and/or sampling plan and QAPP shall be consistent with EPA's 2002 acute and chronic toxicity testing guidance for marine and estuarine systems, using one or more of the test organisms listed in the table below.[36,37] MassDEP may, at its discretion, approve the use of other test organisms consistent with the recommendations in those documents.

Marine and Estuarine Toxicity Test Organisms for Streamlined WER for Discharges of Copper	
Acute Toxicity Test Organisms	**Chronic Toxicity Test Organisms**
Mysid (*Mysidopsis bahia*)	sheepshead minnow (*Cyprinodon variegatus*)
sheepshead minnow (*Cyprinodon variegatus*)	inland silverside (*Menidia beryllina*)
inland silverside (*Menidia beryllina*)	mysid (*Mysidopsis bahia*)
Atlantic silverside (*Menidia menidia*)	sea urchin (*Arbacia punctulata*)
tidewater silverside (*Menidia peninsulae*)	red macroalga (*Champia parvula*)

[36].EPA. 2002a. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. Fifth Edition. October 2002. EPA-821-R-02-012.
[37].EPA. 2002b. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Third Edition. October 2002. EPA-821-R-02-014.

29a: AQUATIC LIFE CRITERIA

APPENDIX F: Conversion Factors (CF) to Convert from Total to Dissolved or from Dissolved to Total Concentrations

Conversion Factors (CF) to Convert from Total to Dissolved Concentrations (multiply by CF) or Convert from Dissolved to Total Concentrations (divide by CF)*				
Metal	**CF for Freshwater CMC**	**CF for Freshwater CCC**	**CF for Saltwater CMC**	**CF for Saltwater CCC**
Arsenic	1.000	1.000	1.000	1.000
Cadmium	1.136672-[(ln hardness)(0.041838)]	1.101672-[(ln hardness)(0.041838)]	0.994	0.994
Chromium III	0.316	0.860	-	-
Chromium VI	0.982	0.962	0.993	0.993
Copper	0.960	0.960	0.83	0.83
Lead	1.46203-[(ln hardness)(0.145712)]	1.46203-[(ln hardness)(0.145712)]	0.951	0.951
Mercury	0.85	0.85	0.85	0.85
Nickel	0.998	0.997	0.990	0.990
Selenium	0.996	0.922	0.998	0.998
Silver	0.85	-	0.85	-
Zinc	0.978	0.986	0.946	0.946

* Acronyms:
CCC = Criterion Continuous Concentration
CF = Conversion Factors
CMC = Criterion Maximum Concentration

TABLE 29
GENERALLY APPLICABLE CRITERIA

29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
Acenaphthene	83329	P	70	90	
Acrolein	107028	P	3	400	
Acrylonitrile	107131	P	0.061	7.0	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Aldrin	309002	P	0.00000077	0.00000077	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Anthracene (polycyclic aromatic hydrocarbon or PAH)	120127	P	300	400	
Antimony	7440360	P	5.6	640	Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day as applicable.
Arsenic	7440382	P	0.018	0.14	The exposure criteria are based on carcinogenicity of 10^{-6} risk These recommended water quality criteria refer only to the inorganic form of arsenic. Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable
Asbestos	1332214	P	7 million fibers/L	--	Criterion was determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day.

TABLE 29
GENERALLY APPLICABLE CRITERIA

29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
Bacteria (Pathogens)			*See* 314 CMR 4.05(3), (4), and (5)(f)		
Barium	7440393		1,000	--	Criterion was determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day.
Benzene	71432	P	0.58-2.1	16-58	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Benzidine	92875	P	0.00014	0.011	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Benzo(a)anthracene (PAH)	56553	P	0.0012	0.0013	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Benzo(a)pyrene (PAH)	50328	P	0.00012	0.00013	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Benzo(b)fluoranthene (PAH) (also known as 3,4-benzofluoranthene)	205992	P	0.0012	0.0013	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Benzo(k)fluoranthene (PAH)	207089	P	0.012	0.013	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Beryllium	7440417	P	3.7 ng/L	64 ng/L	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Bis(2-Chloroethyl) Ether	111444	P	0.03	2.2	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Bis(Chloromethyl) Ether	542881		0.00015	0.017	The exposure criteria are based on carcinogenicity of 10^{-6} risk.

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29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
Bis(2-Chloro-1-methylethyl) Ether (also known as Bis(2-Chloroisopropyl) Ether)	108601	P	200	4,000	
Bis(2-Ethylhexyl) Phthalate (also known as Di(2-Ethylhexyl)-Phthalate)	117817	P	0.32	0.37	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Bromoform[36] (also known as tribromomethane)	75252	P	7.0	120	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Butylbenzyl Phthalate	85687	P	0.10	0.10	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Cadmium	7440439	P	5	-	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1993). Criterion was determined assuming a human body weight of 70-kilograms and a drinking water consumption rate of 2 liters/day.
Carbon Tetrachloride	56235	P	0.4	5	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Chlordane	57749	P	0.00031	0.00032	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Chlorobenzene (also known as monochlorobenzene)	108907	P	100	800	
Chlorodibromomethane[36] (also known as dibromochloromethane)	124481	P	0.80	21	The exposure criteria are based on carcinogenicity of 10^{-6} risk.

[36] See also total trihalomethanes.

TABLE 29
GENERALLY APPLICABLE CRITERIA

29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[Π]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
Chloroform[36] (also known as trichloromethane)	67663	P	60	2,000	
2-Chloronaphthalene	91587	P	800	1,000	
2-Chlorophenol	95578	P	30	800	
Chlorophenoxy Herbicide (also known as 2,4-D)	94757		70	12,000	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1993) and was determined assuming a 70 kg adult ingests 2 liters/day of drinking water.
Chlorophenoxy Herbicide (also known as 2,4,5-TP or Silvex)	93721		50	400	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1996) and was determined assuming a 70 kg adult ingests 2 liters/day of drinking water.
Chromium (total)	7440473	P	100	--	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1993) and was determined assuming a 70 kg adult ingests 2 L/day of drinking water and that 0.71 of the total exposure to chromium is through drinking water.
Chrysene (PAH)	218019	P	0.12	0.13	The exposure criteria are based on carcinogenicity of 10^{-6} risk. EPA has issued a Maximum Contaminant Level for this chemical which may be more stringent.
Copper	7440508	P	1,300	--	The exposure criterion is based on carcinogenicity of 10^{-6} risk. The exposure criterion was determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day.

TABLE 29
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29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
Cyanide	57125	P	4	400	These recommended water quality criteria are expressed as µg total cyanide (*i.e.*, zinc-potassium cyanide, free potassium cyanide and hydrocyanic acid).
Dibenzo(a,h)anthracene	53703	P	0.00012	0.00013	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
1,2-Dichlorobenzene (also known as o-DCB)	95501	P	600	3,000	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1993) and was determined by assuming that a 70 kg adult ingests 2 liters/day of water.
1,3-Dichlorobenzene	541731	P	7	10	
1,4-Dichlorobenzene (also known as p-DCB)	106467	P	5	900	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1993).
3,3'-Dichlorobenzidine	91941	P	0.049	0.15	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Dichlorobromomethane[36] (also known as Bromodichloromethane)	75274	P	0.95	27	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
p,p′-Dichlorodiphenyldichloroethane (also known as DDD)	72548	P	0.00012	0.00012	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
p,p′-Dichlorodiphenyldichloroethylene (also known as DDE)	72559	P	0.000018	0.000018	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
p,p′-Dichlorodiphenyltrichloroethane (also known as DDT)	50293	P	0.000030	0.000030	The exposure criteria are based on carcinogenicity of 10^{-6} risk.

TABLE 29 GENERALLY APPLICABLE CRITERIA					
29b: HUMAN HEALTH CRITERIA**					
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[Π]**	**EXPOSURE TYPE**		**NOTES**
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	**FISH & SHELLFISH CONSUMPTION ONLY µg/L**	
1,2-Dichloroethane	107062	P	5	650	The exposure criteria are based on carcinogenicity of 10^{-6} risk. Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1989). The criterion is based on the 1,2-dichloroethane practical quantitation limit (PQL)
1,1-Dichloroethylene	75354	P	7	20,000	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1989). The criterion is based on the 1,1-dichloroethylene PQL.
2,4-Dichlorophenol	120832	P	10	60	
1,2-Dichloropropane	78875	P	0.90	31	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
1,3-Dichloropropene	542756	P	0.27	12	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Dieldrin	60571	P	0.0000012	0.0000012	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Diethyl Phthalate	84662	P	600	600	
2,4-Dimethylphenol	105679	P	100	3,000	
Dimethyl Phthalate	131113	P	2,000	2,000	
Di-n-Butyl Phthalate	84742	P	20	30	

TABLE 29 GENERALLY APPLICABLE CRITERIA					
29b: HUMAN HEALTH CRITERIA**					
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[Π]**	**EXPOSURE TYPE**		**NOTES**
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	**FISH & SHELLFISH CONSUMPTION ONLY µg/L**	
Dinitrophenols	25550587		10	1,000	
2,4-Dinitrophenol	51285	P	10	300	
2,4-Dinitrotoluene	121142	P	0.049	1.7	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Dioxin (also known as 2,3,7,8-Tetrachloro-dibenzo-p-dioxin or TCDD)	1746016	P	5.0E-9	5.1E-9	The exposure criteria are based on carcinogenicity of 10^{-6} risk. Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.
1,2-Diphenylhydrazine	122667	P	0.03	0.2	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
alpha-Endosulfan	959988	P	20	30	
beta-Endosulfan	33213659	P	20	40	
Endosulfan Sulfate	1031078	P	20	40	
Endrin	72208	P	0.03	0.03	
Endrin Aldehyde	7421934	P	1	1	
Ethylbenzene	100414	P	68	130	
Fluoranthene	206440	P	20	20	
Fluorene (PAH)	86737	P	50	70	
Heptachlor	76448	P	0.0000059	0.0000059	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Heptachlor Epoxide	1024573	P	0.000032	0.000032	The exposure criteria are based on carcinogenicity of 10^{-6} risk.

TABLE 29
GENERALLY APPLICABLE CRITERIA

29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[Π]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
Hexachlorobenzene	118741	P	0.000079	0.000079	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Hexachlorobutadiene	87683	P	0.01	0.01	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
alpha-Hexachlorocyclohexane (also known as alpha-HCH)	319846	P	0.00036	0.00039	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
beta-Hexachlorocyclohexane (also known as beta-HCH)	319857	P	0.008	0.014	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
gamma-Hexachlorocyclohexane (also known as gamma-HCH or Lindane)	58899	P	0.2	4.4	The Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1991) and was determined assuming a human body weight of 70-kilograms and a drinking water ingestion rate of 2 liters/day.
Hexachlorocyclohexane -Technical (also known as technical HCH)	608731		0.0066	0.010	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Hexachlorocyclopentadiene	77474		4	4	
Hexachloroethane	67721	P	0.1	0.1	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Indeno(1,2,3-cd) pyrene (PAH)	193395	P	0.0012	0.0013	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Isophorone	78591	P	34	1,800	The exposure criteria are based on carcinogenicity of 10^{-6} risk.

TABLE 29
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29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
Manganese	7439965		50	100	The Drinking Water Plus Fish and Shellfish Consumption criterion for manganese is not based on toxic effects, but rather is intended to minimize qualities such as laundry stains and objectionable tastes in beverages. The Fish & Shellfish Consumption Only criterion was determined assuming a human body weight of 70-kilograms, and a fish consumption rate of 17.5 grams/day.
Mercury (inorganic)	--		2	--	The Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (2004) and was determined assuming a human body weight of 70-kilograms and a drinking water ingestion rate of 2 liters/day.
Methylmercury	22967926	P	-	0.3 mg/kg	The Fish and Shellfish Consumption Only criterion was determined assuming a human body weight of 70-kilograms, and a fish consumption rate of 17.5 grams/day.
Methoxychlor	72435		0.02	0.02	
3-Methyl-4-Chlorophenol (also known as p-chloro-m-cresol)	59507	P	500	2,000	
2-Methyl-4,6-Dinitrophenol	534521	P	2	30	
Methyl Bromide	74839	P	100	10,000	

TABLE 29 GENERALLY APPLICABLE CRITERIA					
29b: HUMAN HEALTH CRITERIA**					
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[Π]**	**EXPOSURE TYPE**		**NOTES**
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	**FISH & SHELLFISH CONSUMPTION ONLY µg/L**	
Methylene Chloride (also known as Dichloromethane)	75092	P	5	1,000	The Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1995) and was derived based on the Practical Quantitation Limit (PQL) for Methylene Chloride. The Fish and Shellfish Consumption Only criteria are based on carcinogenicity of 10^{-6} risk.
Nickel	7440020	P	100	4,600	The Drinking Water Plus Fish and Shellfish Consumption criterion is based on the ORSG[39]. This ORSG is derived assuming that an adult ingests 2 L/day of water. The criteria were determined assuming a human body weight of 70-kilograms and a fish consumption rate of 17.5 grams/day.
Nitrate (as N) (criterion also applies to total nitrate/nitrite)	14797558		10,000	--	Criterion was determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day.
Nitrite	14797650		1,000	--	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1996) and was derived assuming that a 4 kg infant ingests 0.64 L of formula per day.
Nitrobenzene	98953	P	10	600	

[39] The MassDEP Office of Research and Standards (ORS) issues guidance for chemicals other than those with Massachusetts MCLs in drinking water. These ORS guidance values are known as ORS Guidelines or ORSG and are usually developed for use by Departmental programs in the absence of any other federal standards or guidance. ORS uses methodologies similar to that used by the EPA's Office of Groundwater and Drinking Water (OGWDW) when setting guidelines for chemicals in drinking water.

TABLE 29 GENERALLY APPLICABLE CRITERIA					
29b: HUMAN HEALTH CRITERIA**					
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[II]**	**EXPOSURE TYPE**		**NOTES**
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	**FISH & SHELLFISH CONSUMPTION ONLY µg/L**	
Nitrosamines	-		0.0008	1.24	The exposure criteria are based on carcinogenicity of 10^{-6} risk. Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.
Nitrosodibutylamine	924163		0.0063	0.22	The exposure criteria are based on carcinogenicity of 10^{-6} risk. Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.
Nitrosodiethylamine	55185		0.0008	1.24	The exposure criteria are based on carcinogenicity of 10^{-6} risk. Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.

TABLE 29 GENERALLY APPLICABLE CRITERIA					
29b: HUMAN HEALTH CRITERIA**					
POLLUTANT	**CAS NUMBER***	**PRIORITY (P)[11]**	**EXPOSURE TYPE**		**NOTES**
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	**FISH & SHELLFISH CONSUMPTION ONLY µg/L**	
Nitrosopyrrolidine	930552		0.016	34	The exposure criteria are based on carcinogenicity of 10^{-6} risk. Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.
N-Nitrosodimethylamine (also known as NDMA)	62759	P	0.00069	3.0	The exposure criteria are based on carcinogenicity of 10^{-6} risk. Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.
N-Nitrosodi-n-Propylamine	621647	P	0.0050	0.51	The exposure criteria are based on carcinogenicity of 10^{-6} risk. Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.

TABLE 29
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29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[Π]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
N-Nitrosodiphenylamine	86306	P	3.3	6.0	The exposure criteria are based on carcinogenicity of 10^{-6} risk. Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.
Pentachlorobenzene	608935		0.1	0.1	
Pentachlorophenol	87865	P	0.03	0.04	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
pH	-		*See* 314 CMR 4.05(3) and 4.05(4)		
Phenol	108952	P	4,000	300,000	
Polychlorinated Biphenyls (PCBs)		P	0.000064	0.000064	The exposure criteria are based on carcinogenicity of 10^{-6} risk. This criterion applies to total PCBs (*e.g.*, the sum of all congener or all isomer or homolog or Aroclor analyses). Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.
Pyrene (PAH)	129000	P	20	30	
Radioactivity			*See* 314 CMR 4.05(5)(d): *Radioactivity*		

TABLE 29
GENERALLY APPLICABLE CRITERIA

29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[Π]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
Selenium	7782492	P	50	4,200	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (1996) and was determined assuming a human body weight of 70-kilograms and a drinking water consumption rate of 2 liters/day. Fish and Shellfish Consumption Only Criterion was determined assuming a human body weight of 70-kilograms and a fish consumption rate of 17.5 grams/ day.
Solids (Dissolved) and Salinity	-		250,000	-	This criterion applies to the total of chlorides and sulfates.
1,2,4,5-Tetrachlorobenzene	95943		0.03	0.03	
Tetrachloroethylene	127184	P	10	29	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
1,1,2,2-Tetrachloroethane	79345	P	0.2	3	The exposure criteria are based on carcinogenicity of 10^{-6} risk.

TABLE 29
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29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
Thallium	7440280	P	0.24	0.47	Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.
Toluene	108883	P	57	520	
Total Trihalomethanes (TTHM) (the sum of bromodichloromethane, dibromochloro-methane, bromoform (tribromomethane) and chloroform (trichloromethane))			80	--	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL (2004).
Toxaphene	8001352	P	0.00070	0.00071	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Trans-1,2-Dichloroethylene	156605	P	100	4,000	
1,2,4-Trichlorobenzene	120821	P	0.071	0.076	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Trichloroethylene	79016	P	0.6	7	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
1,1,1-Trichloroethane	71556	P	200	200,000	Drinking Water Plus Fish and Shellfish Consumption criterion is based on the MMCL and assumes a human body weight of 70-kilograms and a drinking water consumption rate of 2 liters/day.

TABLE 29
GENERALLY APPLICABLE CRITERIA

29b: HUMAN HEALTH CRITERIA**

POLLUTANT	CAS NUMBER*	PRIORITY (P)[II]	EXPOSURE TYPE		NOTES
			DRINKING WATER PLUS FISH & SHELLFISH CONSUMPTION† µg/L	FISH & SHELLFISH CONSUMPTION ONLY µg/L	
1,1,2-Trichloroethane	79005	P	0.55	8.9	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
2,4,5-Trichlorophenol	95954		300	600	
2,4,6-Trichlorophenol	88062	P	1.5	2.8	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Vinyl Chloride	75014	P	0.022	1.6	The exposure criteria are based on carcinogenicity of 10^{-6} risk.
Zinc	7440666	P	7,400	26,000	Criteria were determined assuming a human body weight of 70-kilograms, a drinking water consumption rate of 2 liters/day, and a fish consumption rate of 17.5 grams/day, as applicable.

** Metals criteria are expressed as total concentrations. To identify Massachusetts Maximum Contaminant Levels (MMCL) for pollutants not listed in this table, *see* 310 CMR 22.00: *Drinking Water*.

* Chemical Abstracts Service (CAS) Numbers, which are maintained in the CAS registry, are unique numeric identifiers for chemical substances. CAS is a division of the American Chemical Society.

[II] The Priority Pollutants are a subset of toxic pollutants for which EPA has published analytical test methods. The list of Priority Pollutants are published at 40 CFR Part 423, Appendix A.

† Unless otherwise noted, criteria are based on a human body weight of 80 kilograms, a water intake rate of 2.4 liters/day (representing the per capita estimate of combined direct and indirect household tapwater ingestion at the 90th percentile for U.S. adults ages 21 and older), and an organism ingestion rate of 22 grams/day (representing the 90th percentile consumption rate of finfish and shellfish from inland and nearshore waters for U.S. adults ages 21 and older).

(e) Table 30: Organoleptic Effect Criteria.

TABLE 30 ORGANOLEPTIC EFFECT CRITERIA** (*e.g.*, taste and odor)		
POLLUTANT	**CAS NUMBER***	**CRITERION µg/L**
Acenaphthene	83329	20
Chlorobenzene (also known as monochlorobenzene)	108907	20
2-Chlorophenol	95578	0.1
3-Chlorophenol		0.1
4-Chlorophenol	106489	0.1
Copper	7440508	1,000
2,3-Dichlorophenol		0.04
2,4-Dichlorophenol	120832	0.3
2,5-Dichlorophenol		0.5
2,6-Dichlorophenol		0.2
3,4-Dichlorophenol		0.3
2,4-Dimethylphenol	105679	400
Hexachlorocyclopentadiene	77474	1
Iron	7439896	300
2-Methyl-4-Chlorophenol		1,800
3-Methyl-4-Chlorophenol (also known as p-chloro-m-cresol)	59507	3,000
3-Methyl-6-Chlorophenol		20

TABLE 30 ORGANOLEPTIC EFFECT CRITERIA (continued)** (*e.g.*, taste and odor)		
POLLUTANT	**CAS NUMBER***	**CRITERION µg/L**
Nitrobenzene	98953	30
Pentachlorophenol	87865	30
Phenol	108952	300
2,3,4,6-Tetrachlorophenol		1
2,4,5-Trichlorophenol	95954	1
2,4,6-Trichlorophenol	88062	2
Zinc	7440666	5,000

** Metals criteria are expressed as total concentrations.

* Chemical Abstracts Service (CAS) Numbers, which are maintained in the CAS registry, are unique numeric identifiers for chemical substances. CAS is a division of the American Chemical Society.

4.07: Severability

If any provision of 314 CMR 4.00 is held invalid, the remainder of 314 CMR 4.00 shall not be affected.

REGULATORY AUTHORITY

314 CMR 4.00: M.G.L. c. 21, § 27.