Glossary of Drinking Water Regulatory Terms

Best Available Technology or "BAT" means the best technology Treatment Techniques, or other means which the EPA or Department finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration).

Compliance Period means a three-year (calendar year) period within a Compliance Cycle. Each Compliance Cycle has three-year Compliance Periods. Within the first Compliance Cycle, the first Compliance Period runs from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998; the third from January 1, 1999 to December 31, 2001.

Consecutive Public Water System means a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems. *[Most monitoring requirements are met by the PWS supplying their water.]*

Finished Water means water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system (*e.g.*, booster disinfection, addition of corrosion control chemicals).

Groundwater means all water that exists beneath the land surface in soils or geologic formations, specifically that part of the subsurface water in the Saturated Zone.

Groundwater under the Direct Influence of Surface Water means any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions.

Interim Wellhead Protection Area (IWPA) means that for public water systems using wells or Wellfields that lack a Department-approved Zone II, the Department will apply an Interim Wellhead Protection Area. This Interim Wellhead Protection Area shall be a one half mile radius measured from the well or Wellfield for sources whose approved pumping rate is 100,000 gpd or greater. For wells or Wellfields that pump less than 100,000 gpd, the IWPA radius is proportional to the approved pumping rate which may be calculated according to the following equation: IWPA radius in feet = (32 x pumping rate in gallons per minute) + 400. A default IWPA radius or an IWPA radius otherwise computed and determined by the Department shall be applied to Transient Non-community Water System (TNC) and Non-transient Non-community Water System (NTNC) wells when there is no metered rate of withdrawal or no approved pumping rate.

Locational Running Annual Average (LRAA) means the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

Maximum Contaminant Level or MCL means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system. The definition of Maximum

Contaminant Level for the purpose of the consumer confidence report is contained in 310 CMR 22.16A(4)(c)2. *[An MCL that is not based on a federal standard is termed a Massachusetts MCL (MMCL)]*

[Monitoring Waiver is a reduction or elimination of the routine monitoring requirements for one or more contaminant. Waivers are issued for a defined period of time on a case-by-case basis after a review of historic water quality results, potential sources of contamination and source protection measures.]

Public Water System means a system for the provision to the public of water for human consumption, through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year. Public Water System includes any collection, treatment, storage, and distribution facilities under control of the operator of such a system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. The Department may presume that a system is a Public Water System as defined in 310 CMR 22.00 based on the average number of persons using a facility served by the system or on the number of bedrooms in a residential home or facility. The Department reserves the right to evaluate and determine whether two or more wells located on commonly owned property, that individually may serve less than 25 people, but collectively serve more than 25 people for more than 60 days of the year should not be regulated as a Public Water System, taking into account the risk to public health. A Public Water System includes a "Community Water System" or a "Non-community Water System". *[Referred to as the class of the PWS]*

(a) Community Water System means a Public Water System which serves at least 15 service connections used by year round residents or regularly serves at least 25 year round residents. *[Examples include municipal systems, condominiums, apartments, trailer parks]*

(b) Non-community Water System means a Public Water System that is not a Community Water System.

1. Non-transient Non-community Water System or NTNC means a Public Water System that is not a Community Water System and that has at least 15 service connections or regularly serves at least 25 of the same individuals or more approximately four or more hours per day, four or more days per week, more than six months or 180 days per year, such as a workplace providing water to its employees. *[Examples include schools/daycares, medical facilities, businesses]*
2. Transient Non-community Water System or TNC means a Public Water System that is not a Community Water System or a Non-transient Non-community Water System but is a Public Water System which has at least 15 service connections or serves water to 25 different persons at least 60 days of the year. Some examples of these types of systems are: restaurants, motels, camp grounds, parks, golf courses, ski areas and community centers.

Raw Water means water in its natural state, prior to treatment, which typically is the water entering the first treatment process of a water treatment plant. *[Raw water does not represent what is delivered to the public.]*

Reliably and Consistently below the MCL means that though a system detects contaminants in its water supply, it has sufficient knowledge of the source or extent of the contamination to predict that the MCL would not be exceeded in the future. Wide variations in analytical results or an analytical result which is close to the MCL are examples of situations where systems would not meet the "reliably and consistently" test.

River Source means a drinking water source with a direct intake located at any river or stream that is designated as a drinking water source in 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*. Protected Zones A, B, and C, as defined in 310 CMR 22.00, do not apply to River Sources designated as Class B under 314 CMR 4.00: *Massachusetts Surface Water Quality Standards*.

Running Annual Average. The Running Annual Average for MCL/MRDL compliance calculation purposes is defined as the average of quarterly or monthly averages of the compliance monitoring result(s) from the prior four calendar quarters. If multiple compliance monitoring samples are collected in any given quarter or month, then the results of these samples are averaged in order to establish a single representative contaminant concentration for each quarter or month. These quarterly (four values) or monthly (12 values) concentrations are then averaged for the prior four calendar quarters. If all of the required compliance monitoring sample(s) for a quarter or month were not collected, then the Running Annual Average calculation shall exclude a concentration value for that quarter or month (*e.g*. if one quarter's sampling is missing, then the Running Annual Average is based upon the sum of the quarterly averages from the other three quarters divided by three). Results from additional samples that were collected and analyzed in the same manner as compliance monitoring samples and that are representative of drinking water being provided to the public may also be used in this calculation.

Surface Water means all water that is open to the atmosphere and subject to surface runoff.

Tier 1 Public Notice means a public notice required for 310 CMR 22.00 violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.

Tier 2 Public Notice means a public notice required for 310 CMR 22.00 violations and situations with potential to have serious adverse effects on human health.

Tier 3 Public Notice means a public notice for all other 310 CMR 22.00 violations and situations not included in Tier 1 and Tier 2.

Treatment Technique (TT) means a process, practice, or device required by 310 CMR 22.00, the National Primary Drinking Water Standards, or by the terms and conditions of a permit, approval or order issued by the Department intended to reduce the level of a contaminant or other constituent in drinking water.

Variances and Exemptions means, as defined in 310 CMR 22.16A(4)(d)1., permission by the Department or EPA not to meet an MCL or a Treatment Technique under certain conditions.

Wholesale System means a Public Water System that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another Public Water System. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

Zone A means:
(a) the land area between the Surface Water Source and the upper boundary of the Bank;
(b) the land area within a 400 foot lateral distance from the upper boundary of the Bank of a Class A Surface Water Source, as defined in 314 CMR 4.05(3)(a): *Class A*; and
(c) the land area within a 200 foot lateral distance from the upper boundary of the Bank of a Tributary or associated Surface Water body.

Zone B means the land area within ½ mile of the upper boundary of the Bank of a Class A Surface Water Source, as defined in 314 CMR 4.05(3)(a): *Class A*, or edge of Watershed, whichever is less. However, Zone B shall always include the land area within a 400-foot lateral distance from the upper boundary of the Bank of the Class A Surface Water Source.

Zone C means the land area not designated as Zone A or B within the Watershed of a Class A Surface Water Source as defined at 314 CMR 4.05(3)(a): *Class A*.

Zone I means the protective radius required around a public water supply well or Wellfield. For Public Water System wells with approved yields of 100,000 gpd or greater, the protective radius is 400 feet. Wellfields and infiltration galleries with approved yields of 10,000 gpd or greater require a 250-foot protective radius. Protective radii for all other Public Water System wells, Wellfields, and infiltration galleries are determined by the following equation: Zone I radius in feet = (150 x log of pumping rate in gpd) - 350. This equation is equivalent to the chart in the *Guidelines and Policies for Public Water Systems*. A default Zone I radius or a Zone I radius otherwise computed and determined by the Department shall be applied to Transient Non-community Water System (TNC) and Non-transient Non-community Water System (NTNC) wells when there is no metered rate of withdrawal or no approved pumping rate. In no case shall the Zone I radius be less than 100 feet.

Zone II means that area of an aquifer that contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at approved yield, with no recharge from precipitation). It is bounded by the groundwater divides that result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone II shall extend upgradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary). The Zone II must include the entire Zone I area. For Springs, the Zone II is that area of an aquifer, which contributes water to the Spring under naturally flowing conditions.

Zone III means that land area beyond the area of Zone II from which Surface Water and groundwater drain into Zone II. The surface drainage area as determined by topography is commonly coincident with the groundwater drainage area and will be used to delineate Zone III. In some locations, where surface and groundwater drainage is not coincident, Zone III shall consist of both the surface drainage and the groundwater drainage areas.