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The Public Health Code of the State of Connecticut

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CHAPTER II

ENVIRONMENTAL HEALTH

Sec. 19-13-B1. Conditions specifically declared to constitute public nuisances

The following conditions are specifically declared to constitute public nuisances:

(a) Bakeries, restaurants and other places where food is prepared or served that are not kept in a clean and sanitary condition; or in which persons who have any communicable disease are employed; or for which suitable toilet facilities are not provided; or in which there is evidence that rats, mice or vermin are present.

(b) Spoiled or diseased meats, whether exposed and offered for sale or being transported or kept for sale.

(c) Barns or stables, hogpens, chicken yards or manure piles or accumulations of organic material so maintained as to be a breeding place for flies.

(d) The discharge or exposure of sewage, garbage or any other organic filth into or on any public place in such a way that transmission of infective material may result thereby.

(e) Privies not screened against flies in populous districts and privies likely to pollute the ground or surface water from which water supply is obtained.

(f) Transportation of garbage, night soil or other organic filth except in tight, covered wagons which prevent leakage or access of flies.

(g) Stagnant water likely to afford breeding places for mosquitoes within a residential district or within a distance of one thousand feet therefrom.

(h) Bone boiling, fat rendering establishments, or tallow or soap works, or other trades, when they can be shown to affect public health or produce serious offense.

(i) Buildings or any part thereof which are in a dilapidated or filthy condition which may endanger the life or health of persons living in the vicinity.

Sec. 19-13-B2. Abatement of nuisance

(a) Any local director of health, upon information of the existence of a nuisance or any pollution occurring within his jurisdiction, or when any such nuisance or pollution comes to his attention, shall, within a reasonable time, investigate and, upon finding such nuisance or pollution exists, shall issue his order in writing for the abatement of the same.

(b) Such order shall specify the nature of such nuisance or pollution and shall designate the time within which such abatement or discontinuance shall be accomplished; and if such order is not complied with within the time specified, the facts shall be submitted to the prosecuting authority. Copies of all orders shall be kept on file by the director of health in his office and copies of the same shall be furnished the state commissioner of health on request.

Septic Tanks, Privies, Cesspools and Other Receptacles for Domestic Sewage; Public Toilet Accommodations

Secs. 19-13-B3—19-13-B20.

Repealed, January 13, 1970.

Subsurface Sewage Disposal

Secs. 19-13-B20a—19-13-B20s.

Repealed, August 16, 1982.

Sec. 19-13-B21. Garbage and refuse

(a) The owner of premises upon which persons reside or which are frequented for pleasure or business shall keep such premises free from accumulations of garbage, rubbish, rags, tin cans, paper, empty barrels, boxes or any material which, because of its character, condition or improper storage, may invite the breeding or collection of flies, mosquitoes or rodents, or which may in any other manner prejudice the public health.

(b) In populous districts stable manure shall be kept in a covered water-tight pit or chamber and shall be removed at least once a week during the period from May first to October first and during the other months at intervals sufficiently frequent to maintain a sanitary condition satisfactory to the director of health. Manure on farms or isolated premises other than dairy farms need not be so protected and removed unless ordered by the director of health.

Sec. 19-13-B22. Manufacturing and other wastes

No materials or waste products from any mill, factory, slaughterhouse, rendering or fertilizing works, junk establishment, common carrier or other industry or utility shall be stored or deposited so as to cause the surrounding atmosphere, land or water to be contaminated or polluted in such a manner as to injure the public health or create offensive conditions.

Sec. 19-13-B23. Keeping of animals

(a) No pigsty shall be built or maintained on marshy ground or land subject to overflow, nor within three hundred feet of any inhabited house or public meeting house upon property other than that of the proprietor of the pigsty.

(b) The carcass of any dead animal not killed for food shall be removed and disposed of within twenty-four hours after death by burial, incineration or other method approved by the local director of health.

Sec. 19-13-B24.

Repealed, June 7, 1966.

Sec. 19-13-B24a.

Repealed, April 22, 1976.

Sec. 19-13-B25. Vacant or abandoned property

No person shall permit any vacant or abandoned property owned or controlled by him to be or to remain in such a condition as to permit or invite the creation of nuisance or other abuses prejudicial to public health.

Sec. 19-13-B26. Sanitation of family campgrounds, including trailer camps, mobile home parks, motels and overnight cabins

No city, town, borough, institution, person, firm or corporation shall operate, maintain or offer for use, or permit to be used, within the state of Connecticut any tract of land on which persons may camp or on which any mobile home park, motel or overnight cabins are maintained except after full and literal compliance with sections 19-13-B26 to 19-13-B29, inclusive and 19a-2a-29 of the Regulations of Connecticut State Agencies.

(Effective June 26, 1972; amended December 27, 2005)

Sec. 19-13-B27.

Repealed, May 19, 1970.

Sec. 19-13-B27a. Youth camps

(a) **Water supply.** A water supply of sanitary quality shall be provided for each youth camp in ample quantity to meet all requirements of the maximum number of persons using such a camp at any time. Whenever water is obtained from other than an approved public water supply, it shall be of safe, sanitary quality approved by the state department of health. Any well shall conform with the requirements of sections 19-13-B51a to 19-13-B51l, inclusive. Such water supply shall be easily obtainable from its source or from a distributing system within a distance of not more than three hundred feet of any camping spot within such tract. In cases where it can be shown that the approved water supply is not adequate to satisfy all demands of the camp, chlorinated lake water may be used for toilets and showers but shall not be supplied to the kitchen or to any sinks.

(b) **Drinking facilities.** Drinking fountains shall be sanitary as prescribed in section 19-13-B35 and no common drinking utensils shall be provided or used.

(c) **Toilet facilities.** Chemical toilets, fly tight privy pits or water flushed toilets shall be provided and shall be maintained in a clean and sanitary condition. Separate toilets for men and women shall be provided. In a residential camp at least one toilet seat for each fifteen persons or fraction thereof shall be provided. At least one toilet seat for each twenty persons or fraction thereof shall be provided in each day camp. Urinals may be substituted for not more than one-half of the total requirement for male campers. No unit site within a camp shall be at a greater distance than three hundred feet from the toilets. The location of all toilets shall be plainly indicated by signs. Privies shall be located at least two hundred feet from a kitchen or food service area.

(d) **Disposal of sewage and refuse.** The method of final sewage or refuse disposal utilized in connection with the operation of a camp shall be such as to create no nuisance and shall conform with the requirements of sections 19-13-B20a to 19-13-B20r, inclusive, and plans for such disposal shall be approved by the state department of health.

(e) **Plumbing.** The plumbing facilities within each camp shall conform with requirements of section 19-13-B45.

(f) **Washing facilities.** Adequate hand washing facilities shall be provided with at least one facility for each twenty persons or fraction thereof. Wash basins and water shall be readily accessible to the toilet rooms. In a residential camp at least one shower house shall be provided with one shower head for each twenty persons or fraction thereof.

(g) **Control of refuse litter.** Supervision and equipment sufficient to prevent littering of the grounds with rubbish, garbage or other refuse shall be provided and maintained. Fly tight depositories for such material shall be provided and conspicuously located. Each unit site within a camp shall be within a distance of not over two hundred feet of such depository. Such depositories shall not be permitted to become foul smelling or unsightly or a breeding place for flies.

(h) **Facilities for dispensing foods or beverages.** Facilities for dispensing foods or beverages shall meet the requirements of section 19-13-B42. Day camps shall collect and store potentially hazardous food in appropriate refrigeration facilities.

(i) **Swimming and bathing facilities.** Swimming and bathing facilities when provided shall comply with the provisions of sections 19-13-B33a, 19-13-B34 and 19-13-B36.

(j) **Health care.** A physician shall be on call and responsible for all health care including first aid. Annually the physician shall sign and date standing orders to

be carried out in his absence by the camp nurse or by a person over age twenty-one having American Red Cross Standard First Aid and Personal Safety Training certification, or the equivalent. Physicians and nurses employed in camps shall hold current Connecticut licenses and registrations. Additional aides under age twenty-one may be employed if they possess American Red Cross Standard First Aid and Personal Safety Training certification or its equivalent but shall not be in charge of health care. All camp health care personnel shall present current proficiency certification in cardiopulmonary resuscitation as evidenced by examination by the American Red Cross or American Heart Association. For residential camps having two hundred fifty or more campers or staff in residence a registered nurse shall be required to be in charge of first aid and emergency medical care activities. First aid equipment and supplies shall be specified by the camp physician in his standing orders. Only nonprescription drugs shall be available in stock containers in camps. Prescription drugs shall be available only on individual prescription unless locked and in the sole custody of a physician. Proof of use records as required under section 19-461 of the general statutes shall be kept by the physician.

(k) **Communicable disease control requirements.** Communicable disease control shall meet the requirements of sections 19-13-A2 to 19-13-A24, inclusive.

(l) **Records.** Records of both staff and campers shall be kept on file at camp and shall include the personal data concerning each member of the staff and camper kept in any reasonable form the camp director may choose, including therein the name, age and address of the individual, the name, address and telephone number including the business telephone number of the parent, guardian, or in the case of an adult next of kin, who shall be notified in an emergency, the date of first attendance at camp and the date of leaving camp permanently in the case of residence camps, or the last date of attendance at camp in the case of day camps, and a physical examination or health status certification by a physician, an advanced practice registered nurse or registered nurse licensed pursuant to chapter 378 or a physician assistant licensed pursuant to chapter 370 dated within thirty-six months prior to the date of arrival at camp. A physical examination, including a complete immunization history, that is required for school purposes may also be used to satisfy this requirement provided it is dated within thirty-six months prior to the date the camper arrives at camp. The physical examination requirement may be waived where such procedure is contrary to the religious beliefs of the camper. A statement requesting such exemption shall be submitted annually and shall be kept on file at the camp. This statement shall be signed by a parent or guardian, shall include affirmation of church membership by an appropriate church authority, and shall grant permission to camp authorities to authorize physical examination or other appropriate measures when medical emergencies occur. The parent or guardian shall certify that he/she accepts complete responsibility for the health of the camper and that to the best of his/her knowledge the camper is in good health. All staff and campers shall be adequately immunized as specified in Sections 10-204a-1-4 of the Regulations of Connecticut State agencies against diphtheria, tetanus, pertussis, polio, measles, rubella, and any other diseases specified in Section 10-204a. The physical examination or health status certification shall include a complete immunization history. Where the individual because of medical or religious reasons does not have such immunizations these reasons shall be so specified in writing in accordance with Section 10-204a(a) of the General Statutes.

(m) **Emergency medical care.** (1) For resident camps there shall be on file a memorandum of understanding between the camp director and the nearest hospital with regard to arrangements for emergency medical care. (2) There shall be on file

a memorandum of understanding with the on-call or resident physician concerning the provision of medical care for emergencies and of routine care to be carried out at camp, including standing orders for the nurse, if there is one, and instructions for the director of first aid in lieu of a resident physician or nurse, for both day and residential camps. (3) There shall be a telephone line available to the first aid area for the use of the first aid staff, with posting of the telephone numbers of the camp physician, camp director, camp nurse, nearest hospital, local director of health in whose jurisdiction the camp falls, local fire department in whose jurisdiction the camp falls, local police department in whose jurisdiction the camp falls, the poison control center, the nearest state police barracks which is the source of snake antivenom or other emergency assistance, and of ambulance services. (4) An abstract record of all cases treated at camp shall be kept in a bound volume noting the date, the condition, the disposal and the persons responsible for the care. At least once a week these cases shall be reviewed by the camp physician who shall sign and date the bound volume indicating his review of cases. (5) There shall be available a defined area where ill or injured individuals may rest and receive care until they are either removed to their homes or recovered. This area shall be adequate to provide for the temporary isolation of any suspected communicable diseases and shall have its own toilet facilities not used for other purposes within the camp.

(n) **Qualifications of management and staff.** (1) No person shall establish, conduct or maintain a youth camp without adequate and competent staff. (2) The camp director shall be over the age of twenty-one and of good character, shall not have been convicted of any offense involving moral turpitude, shall be certified as mentally competent by a physician, shall not use improperly any narcotic or controlled drug, and shall uphold and maintain the standards required under the Youth Camping Act. Except for those persons who have already served at least one summer as a camp director, a camp director shall have had at least sixteen weeks administrative or supervisory experience, in an organized camp or in lieu thereof equivalent training or experience in camping satisfactory to the commissioner. (3) (a) The director of each individual waterfront or swimming area, including areas devoted to the practice of aquatics, shall be over age twenty and shall possess an American Red Cross Lifeguard Training current rating or its equivalent. (b) The director of each small craft waterfront area shall possess current certification in American Red Cross Lifeguard Training or its equivalent and current certification in the small craft safety program of the American Red Cross or its equivalent for the type of small craft used in the camp. Each such director shall comply with the provisions of the Connecticut boating safety laws and laws relating to scuba diving. (4) the director of the Rifle Range shall be at least twenty-one years of age and shall possess a current National Rifle Association Instructor's card or equivalent. (5) The director of the archery range shall be over age eighteen and possess evidence satisfactory to the State Department of Public Health of appropriate training and experience in archery. (6) The director of horseback riding activities shall be over age eighteen and possess evidence satisfactory to the State Department of Public Health of appropriate training and experience. (7) The camp director provided he meets the requirement Section 1, subsection (n) (5) and (n) (6) may serve as director of archery or horseback riding activities in addition to his duties as camp director. Counselors shall be over age sixteen. Counselors in training shall be over age fourteen. (8) In resident camps the ratio of staff, exclusive of cooks, clerical and maintenance personnel, to campers shall be at least one person over age sixteen to six campers under age eight and to eight campers eight years and older. In day camps the ratio

shall be at least one person age sixteen or older to each nine children under age six, and to each twelve children over six years.

(o) **Safety of grounds and program practices.** (1) Fields intended for athletic activities or use shall be maintained free of hazards. (2) The waterfront and aquatic activities shall be laid out and conducted in accordance with the American Red Cross Water Safety Aquatics and Small Craft Activities Standards or equivalent. (3) The rifle range shall be laid out and operated in accordance with standards of the National Rifle Association or its equivalent. (4) Vehicles used for the transport of campers both on and off the camping premises shall have a motor vehicles safety sticker for the current year and shall be licensed including, if necessary, licensure for their specific use. (5) Boats and small crafts shall be licensed or registered under the boating laws, if so required, and this information shall be available upon request to agents of the state department of health. Water safety equipment shall meet United States Coast Guard standards where applicable. (6) When any out of camp outings or trips are planned, advance information shall be kept on file which will include permission of the campers to participate, signed by the parent or guardian, the purpose of the trip and the itinerary, the names of the campers, trip director and staff. The trip director shall be an adult who shall have had experience or hold certification in the activity in which the trip is being conducted, if this is applicable, e.g. Maine Guide's license, Red Cross Water Safety Instructor, etc.

(p) **Arrangements for camp inspection.** The camp director shall make arrangements either personally or through one of the members of the senior camp staff to conduct the state inspector around the camp premises and to supply him with any information, documents or materials necessary in order to comply with the inspection process.

(q) **General sanitation requirements.** The camp site shall be owned by the operator or the operator shall have a written lease giving permission to use the site for a youth camp. The location of the camp shall be such as to provide for adequate drainage of all areas occupied by campers, the food preparation and service area and other activity areas. Buildings shall be maintained in a safe and sanitary condition. When the state department of health or the local director of health so directs, a certificate of approval shall be obtained from the local or state fire marshal. All hot water and space heaters shall be properly located and vented.

(r) **Trailer coaches.** In every camp where space for trailer coaches is rented or offered for rent or on which free occupancy or camping of trailers is permitted to trailer owners or users, sanitary facilities shall be provided for the disposal of wastes from trailer sinks and toilets. Trailer facilities and parking shall comply with the provisions of section 19-14-B44.

(s) **Responsibility of management.** The camp director shall be responsible at all times for the health, comfort and safety of campers and staff and shall have responsibility for maintaining in good repair all sanitary appliances on the camp ground. He shall promptly prosecute or cause to be ejected from such ground any person who willfully or maliciously damages such appliances.

(t) **Exceptions.** Exceptions to the requirements of subsection (a), (c) and (f) may be made by the commissioner of health at his discretion in the case of primitive or pioneer camps. Exceptions to the requirements of subsection (l) may be made by the commissioner of health at his discretion in the case of day camps where the requirements of a physical examination or health memorandum for campers would impose a hardship on the administration of such a camp. Application for such exemptions shall be made in writing by the camp director thirty days before the opening of camp.

(u) **Accident or illness.** Any fatality which occurs at camp or which results from camping activities or any injury or illness which occurs at camp or which results from camping activities and which is attended by a physician, nurse, or person in charge of health care at the camp, and as a result of which the person (1) is sent home, or (2) is admitted to a hospital, or (3) has a clinical report, laboratory analysis, or x-rays performed which result in a positive diagnosis, shall be reported to the state department of health services within twenty-four hours by telephone by the camp director. This verbal report shall be confirmed in writing within seventy-two hours of the verbal report on a form provided by the state department of health services. The original report form shall be maintained at the camp or sponsoring organization for a minimum of two years. A copy shall be forwarded to the state department of health services upon completion of the form. For day camps, such reports are not required for any injury or illness where the individual as a result of such injury or illness is sent home and for which there is no hospital admission or positive diagnosis by clinical report, laboratory analysis, or x-ray.

(v) Administration of Medications and the Monitoring of Diabetes in Youth Camps

(1) Definitions as used in this subsection:

(A) “Administration of medication” means the direct application of a medication by inhalation, ingestion or any other means to the body of a person;

(B) “Advanced practice registered nurse” means an individual licensed pursuant to section 20-94a of the Connecticut General Statutes;

(C) “Authorized prescriber” means a physician, dentist, advanced practice registered nurse, physician assistant, optometrist, or podiatrist;

(D) “Commissioner” means the Commissioner of Public Health or the commissioner’s designated representative;

(E) “Department” means the Connecticut Department of Public Health or any duly authorized representative thereof;

(F) “Medication” means any medicinal preparation including controlled substances, as defined in section 21a-240 of the Connecticut General Statutes;

(G) “Medication error” means failure to administer medication to a child, or failure to administer medication within one (1) hour of the time designated by the authorized prescriber, or failure to administer the specific medication prescribed for a child, or failure to administer the medication by the correct route, or failure to administer the medication according to generally accepted standards of practice, or failure to administer the correct dosage of medication;

(H) “Optometrist” means an individual licensed pursuant to section 20-127 of the Connecticut General Statutes;

(I) “Parent(s)” means the person(s) responsible for the child and may include the legally designated guardian(s) of such child;

(J) “Pharmacist” means a person with a license to practice as a pharmacist in Connecticut in accordance with section 20-590 of the Connecticut General Statutes;

(K) “Physician” means a doctor of medicine or osteopathy licensed to practice medicine in this or another state;

(L) “Physician assistant” means an individual who has two (2) years of pediatric experience and functions under the direction of the consulting physician for the youth camp and meets the requirements of sections 20-12b of the Connecticut General Statutes;

(M) “Podiatrist” means an individual licensed pursuant to chapter 375 of the Connecticut General Statutes;

(N) “Program staff” means those persons responsible for the direct care of children;

(O) “Registered nurse” means a person with a license to practice as a registered nurse in Connecticut in accordance with chapter 378 of the Connecticut General Statutes;

(P) “Self administration of medication” means that the child is able to identify and select the appropriate medication by size, color, amount, or other label identification; knows the frequency and time of day for which the medication is ordered; and consumes the medication appropriately;

(Q) “Significant medication error” means a medication error, which is potentially serious or has serious consequences for a child, such as, but not limited to, the administration of medication by the wrong route; for which the resident has a known allergy; which was given in a lethal or toxic dosage; or which causes serious medical problems resulting from the error. Refusal of a medication is not considered a significant medication error if appropriate follow up action is taken; and

(R) “Staff” means personnel, including volunteers, who provide a service to a youth camp.

(2) Administration of Medications

Youth camps are not required by this subsection to administer medications to children. If a youth camp permits the administration of medications of any kind by unlicensed program staff, the youth camp shall comply with all requirements of this subsection and shall have a written policy and procedures at the youth camp governing the administration of medications which shall include, but not be limited to, the types of medication that will be administered, parental responsibilities, staff responsibilities, proper storage of medication and record keeping. Said policies and procedures shall be available for review by the department during inspections or upon demand and shall reflect current best practice. No program staff member under eighteen (18) years of age shall administer any medication at a youth camp.

Children enrolled at youth camps may self administer medications with documented parental and authorized prescriber’s permission. Children may request and receive assistance from staff in opening containers or packages or replacing lids.

(A) Administration of Nonprescription Topical Medications Only

(i) Description

For the purposes of this subparagraph, nonprescription topical medications shall include:

(I) diaper changing or other ointments free of antibiotic, antifungal, or steroidal components;

(II) medicated powders; and

(III) gum or lip medications available without a prescription;

(ii) Nonprescription Topical Medications Administration/Parent Permission Records

The written permission of the parent shall be required prior to the administration of the nonprescription topical medication and a medication administration record shall be written in ink and kept on file at the youth camp for each child administered a nonprescription topical medication. The medication administration record and parent permission shall become part of the child’s health record when the course of medication has ended. Any medication error shall be documented in the record. This information shall include:

(I) the name, address, and date of birth of the child;

(II) the name of the medication;

(III) the schedule and site of administration of the medication, as applicable, according to the manufacturer's directions;

(IV) the name, address, telephone number, signature and relationship to the child of the parent(s) authorizing the administration of the medication;

(V) the date and time the medication is started and ended;

(VI) the name of the person who administered the nonprescription topical medication; and

(VII) the signature of the camp director or the camp director's designee receiving the parent permission form.

(iii) Nonprescription Topical Medications, Labeling and Storage

(I) The medication shall be stored in the original container and shall contain the following information on the container or packaging indicating:

(a) the individual child's name;

(b) the name of the medication; and

(c) directions for the medication's administration.

(II) The medication shall be stored away from food and inaccessible to children and unauthorized persons. External and internal medications shall be stored separately from each other.

(III) Any unused portion of the medication shall be returned to the parent. Any expired medication shall be destroyed by the program staff member in a safe manner or returned to the parent.

(B) Administration of Medications Other Than Nonprescription Topical Medications

(i) Training Requirements

(I) Prior to the administration of any medication by program staff members, the program staff members who are responsible for administering the medications shall first be trained by a pharmacist, physician, physician assistant, advanced practice registered nurse or registered nurse in the methods of administration of medications and shall receive written approval from the trainer indicating that the trainee has successfully completed a training program as required herein. A program staff member trained and approved to administer medication shall be present whenever a child who has orders to receive medication is enrolled and present at the youth camp, and the youth camp permits the administration of medication by unlicensed program staff.

(II) The training in the administration of medications shall be documented and shall include, but not be limited to, the following:

(a) statement of objectives;

(b) a description of methods of administration including principles and techniques, application and installation of oral, topical, and inhalant medication, including the use of nebulization machines, with respect to specific age groups;

(c) techniques to encourage children who are reluctant or noncompliant to take their medication and the importance of communicating the noncompliance to the child's parent and to the authorized prescriber;

(d) demonstration of techniques by the trainer and return demonstration by participants, assuring that the trainee can accurately understand and interpret orders and carry them out correctly;

(e) recognition of side effects and appropriate follow up action;

(f) avoidance of medication errors and the action to take if a medication error or a significant medication error occurs, or if a dosage is missed or refused;

(g) abbreviations commonly used;

(h) required documentation including parent permission, written orders from the authorized prescriber, and the record of administration;

(i) safe handling, including receiving medication from a parent, safe disposal, and universal precautions; and

(j) proper storage including controlled substances, in accordance with Section 21a-262-10 of the Regulations of Connecticut State Agencies.

(III) Injectable Medications

In addition to the above training, before program staff members may administer injectable medications, they shall have successfully completed a training program on the administration of injectable medications by a premeasured, commercially prepared syringe. The certifying trainer who shall be a pharmacist, physician, physician assistant, advanced practice registered nurse or registered nurse, shall assure that the program staff member understands the indications, side effects, handling and methods of administration for injectable medication. Thereafter, on a yearly basis, the program staff members shall have their skills and competency in the administration of injectable medication validated by a pharmacist, physician, physician assistant, advanced practice registered nurse or registered nurse. Injectable medications shall only be given in emergency situations, by a premeasured commercially prepared syringe, unless a petition for special medication authorization is granted by the department as specified in section 19-13-B27a(v)(2)(B)(vi).

(IV) A program staff member currently certified by the State of Connecticut Department of Mental Retardation to administer medications shall be considered qualified to administer medications at youth camps.

(ii) Training Approval Documents and Training Outline

(I) Upon completion of the required training program, the pharmacist, physician, physician assistant, advanced practice registered nurse or registered nurse who conducted the training shall issue a written approval to each program staff member who has demonstrated successful completion of the required training. Approval for the administration of oral, topical, inhalant medications shall remain valid for three (3) years.

Approval for the administration of injectable medications shall be valid for one (1) year. A copy of the approval shall be on file at the youth camp where the program staff member is employed and shall be available to the department upon request.

(II) The written approval shall include:

(a) the full name, signature, title, license number, address and telephone number of the pharmacist, physician, physician assistant, advanced practice registered nurse or registered nurse who gave the training;

(b) the location and date(s) the training was given;

(c) a statement that the required curriculum areas listed in Sec.19-13-B27a(v)(2)(B)(i)(II) and Sec. 19-13-B27a(v)(2)(B)(i)(III) when applicable were successfully mastered, and indicating the route(s) of administration the trainee has been approved to administer;

(d) the name, date of birth, address and telephone number of the program staff member who completed the training successfully; and

(e) the expiration date of the approval.

(III) The trainer shall provide the trainee with an outline of the curriculum content which verifies that all mandated requirements have been included in the training program. A copy of said outline shall be on file at the youth camp where the trainee is employed for department review. The department may require at any time that

the youth camp licensee obtain the full curriculum from the trainer for review by the department.

(iii) Order From An Authorized Prescriber and Parent's Permission

(I) Except for nonprescription topical medications described in Section 19-13-B27a(v)(2)(A)(i), no medication, prescription or nonprescription, shall be administered to a child without the written order of an authorized prescriber and the written permission of the child's parent which shall be on file at the youth camp. Such medications may include:

(a) oral medications;

(b) topical medications, including eye and ear preparations;

(c) inhalant medications; and

(d) injectable medications, by a premeasured, commercially prepared syringe, to a child with a medically diagnosed condition who may require emergency treatment.

(II) The written order from an authorized prescriber shall contain the following information which may be on the prescription label or on supplemental information provided by the authorized prescriber or pharmacist;

(a) the name, address and date of birth of the child;

(b) the date the medication order was written;

(c) the medication or drug name, dose and method of administration;

(d) the time of the day the medication is to be administered;

(e) the date(s) the medication is to be started and ended as applicable;

(f) relevant side effects and the authorized prescriber's plan for management should they occur;

(g) notation if the medication is a controlled drug;

(h) a listing of any allergies, reactions to, or negative interactions with foods or drugs;

(i) specific instructions from the authorized prescriber who orders the medication regarding how the medication is to be given;

(j) the name, address and telephone number of the parent;

(k) the name, address and telephone number of the authorized prescriber ordering the drug; and

(l) the authorized prescriber's signature.

(III) If the authorized prescriber determines that the training of the program staff member is inadequate to safely administer medication to a particular child, or that the means of administration of medication is not permitted under this subsection, that authorized prescriber may order that such administration be performed by licensed medical staff with the statutory authority to administer medications.

(IV) The program staff member shall administer medication only in accordance with the written order of the authorized prescriber. The parent shall be notified of any medication errors immediately by telephone and in writing within seventy-two (72) hours, and the error shall be documented in the medication administration record.

(iv) Required Records

(I) Except for nonprescription topical medications described in Section 19-13-B27a(v)(2)(A)(i), individual written medication administration records for each child shall be written in ink, reviewed prior to administering each dose of medication and kept on file at the youth camp. The medication administration record shall become part of the child's health record when the course of medication has ended.

(II) The individual written medication administration record for each child shall include:

(a) the name, address, and date of birth of the child;

(b) the name, address, telephone number, signature and relationship to the child of the parent(s) giving permission for the administration of the drug by the program staff member;

(c) the name of the medication or drug;

(d) the dosage ordered and method of administration;

(e) the date, time, and dosage at each administration;

(f) the signature in ink of the program staff member giving the medication at the time of each administration; and

(g) any refusal by the child in accepting the medication, and any follow-up action taken as a result of the refusal.

(III) Medication errors shall be logged and recorded in the individual written medication administration record of the child. Significant medication errors, identified by the camp director or the camp director's designee, shall be reported in writing within seventy-two hours to the department, by the camp director or the camp director's designee. The camp physician shall review all logs of medication errors on a weekly basis, and a record of the review shall be kept on file at the youth camp.

(v) Storage and Labeling

(I) Medication shall be stored in the original child-resistant safety container. The container or packaging shall have a label which includes the following information:

(a) the child's name;

(b) the name of the medication;

(c) directions for the medication's administration; and

(d) the date of the prescription.

(II) Except for nonprescription topical medications described in Section 19-13-B27a(v)(2)(A)(i), medication shall be stored in a locked area or a locked container, in a refrigerator in keeping with the label or manufacturer's directions, away from food and inaccessible to children and unauthorized personnel. External and internal medications shall be stored separately from each other. Keys to the locked area or container shall be accessible only to personnel authorized to administer medication. Controlled drugs shall be stored in accordance with Section 21a-262-10 of the Regulations of Connecticut State Agencies.

(III) All unused or expired medication, except for controlled drugs, shall be returned to the parent or destroyed by the camp director or the camp director's designee if it is not picked up within one (1) week following the camper's departure at the end of camp. Medications that need to be destroyed shall be flushed into sewerage or a septic system in the presence of at least one witness. The youth camp shall contact the CT Department of Consumer Protection for direction on the proper method of disposing of a controlled drug, and shall carry out the direction as required. The youth camp shall keep a written record of the medications destroyed which shall be signed by the person destroying the medication and the witness to the destruction.

(vi) Petition For Special Medication Authorization

(I) The youth camp licensee may petition the department to administer medications to a child cared for at the youth camp by a modality that is not specifically permitted under this subsection by submitting a written application to the department including the following information:

(a) a written order from an authorized prescriber containing the information for the specific child set forth in Section 19-13-B27a(v)(2)(B)(iii) and a statement that the administration by the requested modality is the only reasonable means of providing

medication and that the administration must occur during hours of the child's attendance at the youth camp;

(b) a written training plan including the full name, signature, title, license number, address and telephone number of the physician, advanced practice registered nurse, physician assistant, registered nurse, or pharmacist who will provide the training, a detailed outline of the curriculum areas to be covered in training, and a written statement by the authorized prescriber that the proposed training is adequate to assure that the medication will be administered safely and appropriately to the particular child;

(c) the name, date of birth, address and telephone number of the person(s) who shall participate in the training;

(d) written permission from the child's parent; and

(e) such other information that the department deems necessary to evaluate the petition request.

(II) After reviewing the submitted information, if the department determines that the proposed administration of medication for the particular child can be provided in a manner to assure the health, welfare and safety of the child, it may grant the petition. The department may grant the petition with any conditions or corrective measures the department deems necessary to assure the health, safety and welfare of the child. The department will specify the curriculum that the training program shall cover and the expiration date of the authorization provided in granting the petition. If the department grants the petition, no medication may be administered until after the proposed training program has been successfully completed and a written approval from the physician, advanced practice registered nurse, physician assistant, registered nurse or pharmacist who provided the training is submitted to the department. The approval shall include:

(a) the full name, signature, title, license number, address and telephone number of the physician, advanced practice registered nurse, physician assistant, registered nurse or pharmacist who provided the training;

(b) the location and date(s) the training was given;

(c) a statement that the curriculum approved by the department was successfully mastered by the participant. The statement shall also include the modality of administration of medication that the participant has been approved to administer; and

(d) the name, date of birth, address and telephone number of the person(s) who successfully completed the training.

(III) Copies of all documentation required under this subsection shall be maintained at the facility. The requirements of Sections 19-13-B27a(v)(2)(B)(iv) and 19-13-B27a(v)(2)(B)(v) shall apply to the administration of medication authorized by petition.

(3) The Monitoring of Diabetes in Youth Camps.

(A) Policy and Procedures

(i) All youth camps at which designated program staff members will be administering finger stick blood glucose tests shall have written policies and procedures governing the administration of finger stick blood glucose tests to children diagnosed with diabetes mellitus. The policies and procedures shall address at least the following areas:

(I) parental responsibilities;

(II) staff training and responsibilities;

(III) proper storage, maintenance, and disposal of test materials and supplies;

(IV) record keeping;

(V) reporting test results, incidents, and emergencies to the child's parent and the child's physician, physician assistant, or advanced practice registered nurse; and

(VI) a location where the tests occur that is respectful of the child's privacy and safety needs.

(ii) Said policies and procedures shall be available for review by the department during inspections or upon demand.

(B) Training

(i) Prior to the administration of finger stick blood glucose tests, the program staff member(s) shall have completed the following training requirements:

(I) a course approved by the department in first aid, as verified by a valid first aid certificate on file at the youth camp; and

(II) additional training given by a physician, physician assistant, advanced practice registered nurse, registered nurse, certified emergency medical technician, or the child's parent according to written guidelines provided by the child's physician, physician assistant, or advanced practice registered nurse. The additional training shall include, but not be limited to:

(a) the proper use, storage and maintenance of the child's individual monitoring equipment;

(b) reading and correctly interpreting test results; and

(c) appropriate actions to take when test results fail to fall within specified ranges indicated in the written order from the child's physician, physician assistant, or advanced practice registered nurse.

(ii) The training shall be updated at least every three years when a child with diabetes mellitus who requires finger stick blood glucose testing is present at the youth camp.

(iii) Documentation that program staff member(s) have been trained to administer finger stick blood glucose tests shall be in writing and kept at the facility for review by the department. Such documentation shall indicate:

(I) the subjects covered in training;

(II) the signature and title of the instructor;

(III) the signature and title of the trainee; and

(IV) the date the training was given.

(C) Administration of Finger Stick Blood Glucose Test

(i) Except as provided in subclause (iii) of this subparagraph, only program staff members trained in accordance with subparagraph (B) of this subdivision may administer the finger stick blood glucose test in youth camps. No program staff member under eighteen (18) years of age shall administer finger stick blood glucose tests to another person at a youth camp.

(ii) Whenever a child diagnosed with diabetes mellitus who has orders to receive finger stick blood glucose monitoring is enrolled and present at the facility, a program staff member designated and trained to administer finger stick blood glucose tests shall be present at the youth camp.

(iii) Upon the written authorization of the child's physician, physician assistant or advanced practice registered nurse, and the child's parent, a child may self administer the finger stick blood glucose test under the direct supervision of the designated staff member who has met the training requirements in subparagraph (B) of this subdivision.

(iv) Only those staff trained to administer injectable medications as described in section 19-13-B27a(v)(2)(B)(i)(III) of the Regulations of Connecticut State Agencies and authorized to do so in writing by the child's parent and physician, physician

assistant, or advanced practice registered nurse may administer glucagon in a pre-filled syringe in emergency situations only.

(D) Equipment

(i) The child's parent shall supply the youth camp licensee with the necessary equipment and supplies to meet the child's individual needs. Such equipment and supplies shall include at least the following items:

(I) the child's blood glucose meter and strips;

(II) an appropriate retracting lancing device used in accordance with infection control procedures;

(III) tissues or cotton balls; and

(IV) fast acting carbohydrates to be given to the child as indicated in the written order from the child's physician, physician assistant, or advanced practice registered nurse for hypoglycemia.

(ii) Such equipment and supplies shall be labeled with the child's name and shall remain in a locked storage area when not in use.

(iii) The youth camp licensee shall obtain a signed agreement from the child's parent that the parent agrees to check and maintain the child's equipment in accordance with manufacturer's instructions, restock supplies, and remove material to be discarded from the facility. All materials to be discarded shall be kept locked until it is given to the child's parent for disposal. The youth camp may dispose of medical waste if it has a contract with a medical waste disposal contractor, in accordance with local, state, and federal laws.

(E) Record Keeping

The youth camp licensee shall keep the following records at the facility as part of the child's medical record, and shall update them annually or when there is any change in the information:

(i) A current, written order signed and dated by the child's physician, physician assistant, or advanced practice registered nurse indicating:

(I) the child's name;

(II) the diagnosis of diabetes mellitus;

(III) the type of blood glucose monitoring test required;

(IV) the test schedule;

(V) the target ranges for test results;

(VI) specific actions to be taken and carbohydrates to be given when test results fall outside specified ranges;

(VII) diet requirements and restrictions;

(VIII) any requirements for monitoring the child's recreational activities; and

(IX) conditions requiring immediate notification of the child's parent, emergency contact, the child's physician, physician assistant, or advanced practice registered nurse.

(ii) An authorization form signed by the child's parent which includes the following information:

(I) the child's name;

(II) the parent's name;

(III) the parent's address;

(IV) the parent's telephone numbers at home and at work;

(V) two adult, emergency contact people including names, addresses and telephone numbers;

(VI) the names of the program staff member(s) designated to administer finger stick blood glucose tests and provide care to the child during testing;

- (VII) additional comments relative to the care of the child, as needed;
- (VIII) the signature of the parent;
- (IX) the date the authorization is signed; and
- (X) the name, address and telephone number of the child's physician, physician assistant or advanced practice registered nurse.

(iii) The youth camp director or the youth camp director's designee shall notify the child's parent in writing of the results of all blood glucose tests and any action taken based on the test results, and shall document the test results and any action taken in the child's medical record.

(w) **Emergency Distribution of Potassium Iodide.** Notwithstanding any other provisions of the Regulations of Connecticut State Agencies, during a public health emergency declared by the Governor pursuant to section 2 of public act 03-236 and if authorized by the Commissioner of Public Health via the emergency alert system or other communication system, a youth camp licensed in accordance with section 19a-421 of the Connecticut General Statutes and located within a 10-mile radius of the Millstone Power Station in Waterford, Connecticut shall permit designated staff members to distribute and administer potassium iodide tablets to adults present or to a child in attendance at the youth camp during such emergency, provided that:

(1) Prior written consent has been obtained by the youth camp for such provision. Written consent forms shall be provided by the youth camp to the parent(s) or guardian(s) of each child currently enrolled or employees currently employed at the youth camp promptly upon the effective date of this subdivision. Thereafter, written consent forms shall be provided by the youth camp to the parent(s) or guardian(s) of each minor child upon enrollment and to each new employee upon hire. Such documentation shall be kept at the facility;

(2) Each person providing consent has been advised in writing by the youth camp that the ingestion of potassium iodide is voluntary;

(3) Each person providing consent has been advised in writing by the youth camp about the contraindications and the potential side effects of taking potassium iodide, which include:

(A) persons who are allergic to iodine should not take potassium iodide;

(B) persons with chronic hives, lupus, or other conditions with hypocomplementemic vasculitis should not take potassium iodide;

(C) persons with Graves disease or people taking certain heart medications should talk to their physician before there is an emergency to decide whether or not to take potassium iodide; and,

(D) side effects may include minor upset stomach or rash.

(4) Youth camps shall have designated staff members to distribute and administer potassium iodide to those individuals and minor children for whom prior written consent has been obtained. Such designated staff members shall be eighteen (18) years of age or older and shall have been instructed by the youth camp in the administration of potassium iodide. Such instruction shall include, but not be limited to the following:

(A) the proper use and storage of potassium iodide;

(B) the recommended dosages of potassium iodide to be administered to children and adults as prescribed by the Food and Drug Administration.

(5) Potassium iodide tablets shall be stored in a locked storage area or container, inaccessible to children.

(Effective April 2, 1984; amended August 6, 1996, January 30, 2001, December 4, 2002, January 4, 2005)

Sec. 19-13-B28.

Repealed, June 2, 1997.

Sec. 19-13-B29. Motels and overnight cabins

(a) **Registration.** The management of a motel or any area where overnight cabins are rented for living purposes shall register in writing, with the local director of health of the town, city or borough in which such motel or area is located, a description of the motel or area with its location, and such registration shall be

made annually in January or in advance of the opening of the motel or overnight cabin area for use.

(b) **Water supply.** A water supply of sanitary quality shall be provided in ample quantity to meet all requirements of the maximum number of persons using such a tract at any time. Wherever water is obtained from other than an approved public water supply, it shall be of safe, sanitary quality approved by the state department of health.

(c) **Plumbing.** The plumbing facilities within each motel or cabin shall conform with the requirements of section 19-13-B45.

(d) **Drinking facilities.** Multi-use drinking cups or glasses furnished by management shall be thoroughly cleaned and effectively subjected to an approved bactericidal process after each change of occupancy and single service containers shall be protected against contamination by sanitary covering or storage before use.

(e) **Emergency sanitary facilities.** Sewage disposal facilities for each motel or cabin or group of cabins shall be approved by the local director of health. They shall be laid out on the basis of nonresidential buildings as set forth in sections 19-13-B20h (b) and 19-13-B20l (b), or, if such facilities include complete sanitary facilities for residential use such as cooking and washing, the size and design of such facilities shall be on the basis of number of bedrooms for residential buildings as set forth in sections 19-13-B20a to 19-13-B20r, inclusive. In no case shall septic tanks be installed with a liquid capacity of less than one thousand gallons. The methods of sewage or refuse disposal utilized in connection with a motel or an overnight cabin area, shall be such as to create no nuisance. Where public sewers exist, connection shall be made to such sewers in lieu of private sewage disposal facilities.

(f) **Washing and toilet facilities.** Adequate washing and toilet facilities shall be provided. If individual washing and toilet facilities are not provided in each rental unit, central facilities shall include separate toilets for men and women with at least one toilet seat for each fifteen men or fraction thereof, and at least one toilet seat for each fifteen women or fraction thereof, and at least one wash basin for each twenty men or fraction thereof, and at least one wash basin for each twenty women or fraction thereof. Wash basin and water shall be readily accessible to toilet rooms. Soap and individual towels shall be provided.

(g) **Swimming and bathing facilities.** Swimming and bathing facilities, if provided, shall comply with the provisions of sections 19-13-B33a, 19-13-B34 and 19-13-B36.

(h) **General sanitation requirements.** Buildings shall be maintained in a safe and sanitary condition. When the state department of health or the local director of health so directs, a certificate of approval shall be obtained from the local or state fire marshal. All hot water and space heaters shall be properly located and vented.

(i) **Responsibility of management.** The management of every motel or area for overnight cabins shall assume responsibility for maintaining in good repair all water and sanitary facilities.

(Effective April 11, 1973)

Sec. 19-13-B30. Schoolhouses

In every public, private and parochial school toilet accommodations, water supply, drinking cups, washing facilities, heating, lighting and ventilation shall be maintained in sanitary condition.

Sec. 19-13-B31. Stagnant water

No person shall maintain or permit to be maintained any pond, cesspool, well, cistern, rain barrel or other receptacle containing water or accumulation of stagnant

water in such a condition that mosquitoes may breed therein or may injure health or cause offense to other persons.

Sec. 19-13-B32. Sanitation of watersheds

Unless specifically limited, the following regulations apply to land and watercourses tributary to a public water supply including both surface and ground water sources.

(a) As used in this section, "sewage" shall have the meaning found in section 19-13-B20 (a) of the public health code: "Toxic metals" shall be arsenic, barium, cadmium, chromium, lead, mercury and silver and the salts thereof: "high water mark" shall be the upper limit of any land area which water may cover, either standing or flowing, at any time during the year and "watershed" shall mean land which drains by natural or man-made causes to a public drinking water supply intake.

(b) No sewage disposal system, cesspool, privy or other place for the deposit or storage of sewage shall be located within one hundred feet of the high water mark of any reservoir or within fifty feet of the high water mark of any stream, brook, or watercourse, flowing into any reservoir used for drinking purposes.

(c) No sewage disposal system, cesspool, privy or other place for the deposit or storage of sewage shall be located on any watershed, unless such facility is so constructed that no portion of the contents can escape or be washed into the stream or reservoir.

(d) No sewage shall be discharged on the surface of the ground on any watershed.

(e) No stable, pigpen, chicken house or other structure where the excrement of animals or fowls is allowed to accumulate shall be located within one hundred feet of the high water mark of a reservoir or within fifty feet of the high water mark of any watercourse as above mentioned, and no such structure shall be located on any watershed unless provision is made in a manner acceptable to the commissioner of health for preventing manure or other polluting materials from flowing or being washed into such waters.

(f) No toxic metals, gasoline, oil or any pesticide shall be disposed of as a waste into any watercourse tributary to a public drinking water supply or to any ground water identified as supplying a public water supply well.

(g) Where fertilizer is identified as a significant contributing factor to nitrate nitrogen occurring in excess of 8 mg/l in a public water supply, fertilizer application shall be made only under current guidelines established by the commissioner of health in cooperation with the state commissioner of agriculture, the college of agriculture of the University of Connecticut and the Connecticut agricultural experiment station in order to prevent exceeding the maximum allowable limit in public drinking water of 10.0 mg/l for nitrite plus nitrate nitrogen.

(h) Where sodium occurs in excess of 15 mg/l in a public drinking water supply, no sodium chloride shall be used for maintenance of roads, driveways, or parking areas draining to that water supply except under application rates approved by the commissioner of health, designed to prevent the sodium content of the public drinking water from exceeding 20 mg/l.

(i) The design of storm water drainage facilities shall be such as to minimize soil erosion and maximize absorption of pollutants by the soil. Storm water drain pipes, except for crossing culverts, shall terminate at least one hundred feet from the edge of an established watercourse unless such termination is impractical, the discharge arrangement is so constructed as to dissipate the flow energy in a way that will minimize the possibility of soil erosion, and the commissioner of health finds that a discharge at a lesser distance is advantageous to stream quality. Special protections shall be taken to protect stream quality during construction.

(Effective August 2, 1977)

Swimming Pools and Bathing Places

Sec. 19-13-B33.

Repealed, April 20, 1971.

Sec. 19-13-B33a.

Repealed, October 26, 1984.

Sec. 19-13-B33b. Public pools

The following requirements shall apply to any public pool.

(a) Definitions.

(1) "Public Pool" means an artificial basin constructed of concrete, steel, fiberglass or other relatively impervious material intended for recreational bathing, swimming, diving, or therapeutic purposes which is located either indoors or outdoors and is provided with a controlled water supply and which is not used or intended to be used as a pool at a single family residence. The term also includes a pool located at a single family residence which is used or intended to be used for commercial or business purposes. The term "public pool" includes any related equipment, structures, areas, and enclosures that are intended for the use of the pool patrons or pool staff such as toilet, dressing, locker, shower, and pool equipment rooms. Public pools shall be classified as follows:

(A) "Public Swimming Pools" are conventional pools used or intended to be used for recreational bathing, swimming and water recreation activities.

(B) "Public Wading Pools" are pools principally used or intended to be used for wading and recreational bathing by small children.

(C) "Public Spas," "Whirlpools," or "Hot Tubs" are pools used for recreational bathing which are used in conjunction with high velocity air systems, high velocity water recirculation systems, hot water, cold water, mineral baths or any combination of these items.

(D) "Public Diving Pools" are pools used only for diving or the training and practice of diving techniques.

(E) "Special Purpose Public Pools" are pools used exclusively for a particular purpose, including but not limited to water flumes, pools for scuba diving instruction, therapeutic pools, hydrotherapy pools, floatation vessels and pools used in aquatic programs for handicapped persons.

(2) "Commissioner" means the commissioner of health services or his designee.

(3) "Depth Markers" means numerals of four inches minimum height which are of a contrasting color with the background of the pool and denote water depth in the immediately adjacent portion of the pool.

(4) "One Unit of Lifesaving Equipment" shall consist of a ring buoy not more than fifteen inches inside diameter to which shall be attached a fifty foot length of one-quarter inch line, and a life pole or shepard's crook with blunted ends which is a minimum of twelve feet in length.

(b) General requirements for public pools.

(1) Construction. No person shall construct a public pool or shall substantially alter or reconstruct any public pool except after the plans for such have been approved in accordance with the specifications contained in the most recent edition of the Connecticut Public Swimming Pool Design Guide as adopted and amended by the commissioner. Such plans shall be prepared by and bear the seal of an engineer or architect licensed to practice in the state of Connecticut and shall be approved by the commissioner. The applicant shall forward copies of the approved plans to the director of health or his authorized agent. All public pools shall be constructed or substantially altered or reconstructed in accordance with the plans

and specifications approved by the commissioner unless prior approval of changes has been granted in writing. The danger of disease, drowning or injury to bathers shall be reduced to a practical minimum.

The commissioner may evaluate public pools constructed without the required plan approval to assess conformance with specifications of the Connecticut Public Swimming Pool Design Guide. The commissioner may issue a "certificate of approval for use" to public pools on which construction was completed prior to January 1, 1980 and which are found to comply substantially with the aforementioned criteria. No such certificate shall be issued where deviations from design criteria may substantially increase the risk to public health and safety.

(2) Supervisory Personnel. A person knowledgeable in the operation of the pool and in pool water chemistry and testing shall be on duty on the premises where the pool is located whenever the pool is open for use. Names of supervisory personnel shall be submitted to the local health department annually and whenever a change in such personnel occurs.

(3) Pool Water Quality. Not more than fifteen per cent of the samples of pool water covering a consecutive period of one month or more shall either (1) yield more than two hundred bacterial colonies per milliliter, as determined by the standard (35°C) agar plate count, or (2) show positive test (confirmed test) for coliform organisms in any of five 10-mL portions inoculated into fermentation tubes or contain more than 1.0 coliform colonies per 50 mL. when the membrane filter test is used. All samples shall be collected, the residual disinfectant removed, and the examination conducted in accordance with the procedures outlined in the latest edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association, American Water Works Association, and Water Pollution Control Federation).

(4) Pool Water Clarity. At all times when the pool is in use the water shall be sufficiently clear to permit a secchi disc or a black disc six inches in diameter on a white field, placed on the bottom of the pool at the deepest point, to be clearly visible from the pool deck.

(5) Pool Water Disinfection and Test Kits. Pool water shall be disinfected by an automatic disinfectant feeder which imparts a measurable residual at all times when the pool is in use. These chemical feeders shall comply with the standards of the National Sanitation Foundation or other standards approved by the commissioner of health services. When chlorine is used, a free available chlorine residual of at least 0.8 mg/l as measured by an approved method listed in "Standard Methods for the Examination of Water and Wastewater" as described in subsection 3 above shall be maintained throughout the pool whenever it is open or in use. If cyanuric acid is used to stabilize the free available residual chlorine, or if chlorinated isocyanurate compounds are used, the concentration of cyanuric acid in the water shall not exceed 100 mg/l and a free available chlorine residual of at least 1.5 mg/l shall be maintained throughout the pool whenever it is open or in use. If other halogens are used, residuals of equivalent disinfecting strength shall be maintained. Other disinfecting materials or methods may be used when they have been demonstrated to the commissioner to provide satisfactory disinfection.

A test kit for measuring the concentration of the disinfectant, accurate within 0.1 mg/l shall be provided, at each pool. If the cyanuric acid or chlorinated isocyanurates are used, proper testing equipment for measuring cyanuric acid concentration shall be provided. Chemicals in test kits shall be replaced yearly unless shown to produce accurate test results.

(6) Pool Water pH and Alkalinity. The pool water shall be maintained at a pH value of not less than 7.2 and not over 7.8. Testing equipment for measuring pH value shall be available at each pool. Caustic alkalinity shall not be present.

(7) Records and Testing. A pool operation record including all test results shall be maintained on a daily basis by the pool operator. Immediately prior to the daily opening of the pool for use, tests shall be made to determine the amount of residual disinfectant and the pH. These tests shall be repeated at sufficient frequency during periods of bather use to assure that an adequate disinfectant level and pH value are maintained. Whenever tests indicate that an inadequate disinfectant level or inappropriate pH value are present, immediate action shall be taken to reestablish an appropriate disinfectant level and pH value.

(8) Decks, Dressing Rooms, Toilet Rooms, Shower Requirements. The dressing rooms, hallways, toilet rooms, shower rooms or other rooms to which patrons of pools have access shall be kept clean, in good repair, and well ventilated at all times. The floors of the pool deck and all shower rooms and locker rooms shall be treated with a 0.5% chlorine solution, or an equivalent fungicide, daily. Combs or brushes for common use shall not be provided. All persons shall bathe with warm water and soap before entering the pool. Warm water at a temperature of 90°F to 105°F, shall be furnished at showers convenient to the pool for this purpose. Adequate and convenient toilet facilities shall be available for the use of swimmers. Toilet, lavatory sink, and shower fixtures shall be maintained in proper repair so as to be available in ratios required by Design Criteria in effect at the time of plan approval.

(9) Equipment Rooms, Equipment Areas, and Equipment. Equipment rooms, areas, and equipment shall be kept in good repair and in a clean and sanitary condition. Drain grates shall be vandal proof, designed to prevent hand entrapment, and shall be secured in place in a manner that will prevent removal by bathers.

(10) Deck Equipment. Handrails shall be provided at all steps, stepholes, and ladders. When provided diving stands, lifeguard stands, handrails, and ladders shall be properly secured to the pool deck or pool, as appropriate. Deck accessories and equipment shall be properly maintained and stored.

(11) Pool Chemical Storage. Pool chemicals shall be stored in cool, dry, clean, and well ventilated areas and so as to preclude accidental mixing of different chemicals. Containers shall be tightly closed when not in use.

(12) Vacuuming. Pool bottoms shall be vacuumed or mechanically cleaned as frequently as required to maintain pool cleanliness.

(13) Accessibility to Pool Area. All outdoor pools shall be surrounded by a barrier which shall be a minimum of four feet high and designed to discourage access by unauthorized persons. Entry gates shall be self closing and self latching. When the pool is not open for use, access to the pool shall be prevented.

(14) Lifeguards. When no lifeguard service is in effect a warning sign shall be placed in plain view and shall state "Warning—No Lifeguard on Duty" with legible letters, at least four inches high. This warning shall be easily visible from all entry points into the pool area.

(15) First Aid Kit. Every public pool shall be equipped with an American National Red Cross standard 24-unit first aid kit or equivalent. This first aid kit shall be kept filled and ready for use.

(16) Emergency Telephone. There shall be a telephone or other suitable device for emergency communication readily available in the immediate vicinity of each pool. This telephone or device shall be on the premises where the pool is located.

(17) Signs. Signs shall be conspicuously posted at the pool and in public dressing rooms stating the following:

(A) All persons shall bathe with warm water and soap before entering the pool.

(B) Any persons known or suspected of having a communicable disease shall not use the pool.

(C) Spitting or blowing the nose in the pool is prohibited.

(D) Running, boisterous or rough play (except supervised water sports) is prohibited.

(18) Emergency Communications. Instructions regarding emergency calls shall be prominently posted. All pools shall have posted at their entrance (a) directions to the nearest telephone and the nearest first aid unit and resuscitation equipment; (B) the telephone numbers, in print at least one-quarter inches high, of the nearest police and fire departments, emergency medical service provider, hospital and physicians on call in the immediate area. Additionally these telephone numbers shall be posted at the nearest telephone.

(19) Registration. No person, firm, or corporation shall operate or maintain, within any town, city or borough, any public pool without local permits or licenses if such permits or licenses are required by local ordinance. If such local permits or licenses are not required, the person, firm or corporation shall register the name of the owner or owner's agent, business address, and pool location with the local director of health of the town, city, borough, or district where the public pool is located.

(c) Additional requirements for public swimming pools and public diving pools

(1) Depth Markers. Depth markers shall be provided on the pool rim at points of minimum and maximum depths, at all points where the pool floor changes slope, and at appropriate points in between. Depth markers at these points shall be visible from within the pool and while standing on the pool deck.

(2) Lifeguard Stands. When a lifeguard is on duty, there shall be a raised stand 4 feet minimum height for the lifeguard, located at pool side adjacent to the deep end of the pool, so that all areas of the pool are visible to the lifeguard.

(3) Lifesaving Equipment. Each public swimming pool and public diving pool shall be provided with one unit of lifesaving equipment for each one hundred feet of perimeter of the pool. Life poles or shepherd's crooks shall be mounted in permanent sockets toward the deep area of the pool. Lifesaving equipment shall be mounted in conspicuous places around the pool such as on lifeguard stands, fences or barriers of outdoor pools, and room walls of indoor pools.

(4) Sign. A sign stating the following shall be conspicuously posted at the pool: "No diving is permitted off the deck into shallow areas of the pool."

(d) Additional requirements for public wading pools.

Depth Markers. A minimum of one depth marker shall be provided on the pool rim on each side of public wading pools.

(e) Additional requirements for public spas.

(1) Pool Water Disinfection. When chlorine is used, a free available chlorine residual of at least 1.0 mg/l shall be maintained throughout the public spa whenever it is open or in use.

If other halogens are used, residuals of equivalent disinfecting strength shall be maintained.

(2) Pool Water Temperature. Pool water temperature shall not exceed 104°F in public spas.

(3) Depth Markers. All public spas shall have a minimum of two depth markers indicating maximum water depth. These depth markers shall be located on the spa rim or deck immediately adjacent to the pool.

(4) Precaution Sign. A precaution sign is to be mounted in a clearly visible location, adjacent to the spa. This precaution sign shall contain the following warnings:

CAUTION

(A) Elderly persons and those suffering from heart disease, diabetes, high or low blood pressure should not enter the spa.

(B) Unsupervised use by children is prohibited.

(C) Do not use while under the influence of alcohol, anticoagulants, antihistamines, vasoconstrictors, vasodilators, stimulants, hypnotics, narcotics or tranquilizers.

(D) Do not use alone.

(E) Observe a reasonable time limit, (preferably not longer than 15 minutes) then shower, cool down and, if you wish, return for another brief stay. Long exposures may result in nausea, dizziness or fainting.

(5) Oils, Body Lotions and Soaps. Oils, body lotions and soaps shall be completely removed by the bather prior to use of public spas.

(f) **Special purpose public pools.**

Special purpose public pools shall meet all applicable requirements for public pools.

(g) **Responsibility of director of health.**

When any public pool is found not to meet the requirements of these regulations, or when a condition is found which constitutes a public health or safety hazard or a health nuisance to bathers or pool patrons, the director of health may order such public pool closed until corrections are made. The director of health shall order such closure when there is significant evidence of communicable disease being transmitted through use of the pool, when the public pool is being operated in such manner as to constitute a significant health nuisance, or when imminent safety hazards exist.

Inspections shall be conducted by the director of health or his authorized agent to evaluate conformance with these regulations and to protect the public health and safety.

Any person aggrieved by an order issued by a director of health, may within forty-eight hours after the making of such order, appeal to the commissioner of health services in accordance with Section 19a-229 of the General Statutes and Sections 19-2-1 to 19-2-43 inclusive of the Regulations of Connecticut State Agencies.

(Effective October 26, 1984)

Sec. 19-13-B34. Artificial bathing place without controlled water supply

“Artificial bathing place” means an artificially constructed impounding basin for surface water which is to be used for bathing or swimming by any considerable number of persons other than the immediate family of the owner or proprietor. No artificial bathing place shall be constructed until the location is approved by the local director of health of the town, city or borough in which it is located.

(a) Each such bathing place shall be marked on its rim or otherwise at no greater than eight foot intervals from the shallow end of the area to indicate the depth of the water at such intervals. Where there is a lifeguard on duty there shall also be a raised stand for the life guard, so placed that all areas of the bathing place are visible to the lifeguard on duty.

(b) Each such bathing place shall have minimum equipment consisting of the following: A ring buoy not more than fifteen inches in diameter to which shall be attached a fifty foot length of one-quarter inch line; four pineapples (tightly rolled balls of rope) composed of one-quarter inch line each fifty feet in length; a life pole or shepherd’s crook with blunted end, a minimum of twelve feet in length, for each one hundred running feet of perimeter of the area, such poles to be mounted in

permanent sockets, on opposite sides towards the deep area of the bathing place and attached to the fencing or barrier.

(c) All bathing places have posted at their entrance (1) directions to the nearest telephone and the nearest first aid unit and resuscitation equipment; (2) the telephone numbers, in print at least one-quarter inches high, of the nearest police and fire departments, rescue squad, ambulance service, hospital and physicians on call in the immediate area.

(d) When no lifeguard service is in effect, a warning sign shall be placed in plain view and shall state "Warning—No Lifeguard on Duty" with legible letters, at least four inches high.

(e) The quality of the water shall meet bacterial standards approved by the commissioner and the amount of diluting water shall be not less than 1,000 gallons per day per bather. If the bacterial standard is maintained, the flow requirement may be reduced for short periods of time to no less than 500 gallons per day per bather, with approval of the director of health. This dilution water may be from stream flow or from natural circulation in a large body of impounded water.

(f) The dressing rooms, hallways, toilet rooms, shower rooms or other rooms to which patrons of pools shall have access shall be kept clean and well ventilated at all times. The floors of all shower rooms and locker rooms shall be treated with chlorine solution or other fungicide daily. No combs or brushes for common use shall be provided.

(Effective June 28, 1973)

Sec. 19-13-B35. Drinking cups and drinking fountains

Sanitary drinking fountains shall be installed or individual drinking cups, stored in such a manner as to be protected from contamination, shall be provided, where drinking water is made generally available upon the premises of any building, hotel, restaurant, theatre, hall, schoolhouse, industrial or mercantile establishment or in any park, street, railroad station, railroad car or ship. Where drinking water facilities are provided by any person, firm or corporation for the use of employees engaged in outdoor work or construction work, sanitary drinking fountains shall be installed or water storage containers and individual drinking cups shall be provided by such person, firm or corporation and such cups and the contents of such containers shall be protected against contamination. Such drinking fountains shall be constructed with a slanting jet issuing from a nozzle of non-oxidizing impervious material with a non-oxidizing guard to prevent the mouths and noses of persons using the fountain from coming in contact with the nozzle. The jet shall be located so as not to touch the guard and shall be discharged at such an angle that the water can neither fall back nor be forced back on to the point of discharge. The fountain jet and all openings in the water supply piping shall issue above the level of the fountain bowl. The drainage from the bowl shall be adequate and so constructed as to prevent fouling of the bowl. The drain from the fountain shall not have a direct physical connection to a waste pipe unless the drain is trapped. The waste opening and pipe from the fountain shall be of sufficient size to carry off the water promptly. The opening shall be provided with a strainer. All drinking fountains installed after January 12, 1954, shall be provided with their own receiving bowls and shall not be installed over sinks used for hand washing or other purposes.

Sec. 19-13-B36. Public bathing establishments

A public bathing establishment, as used in this section, shall include the grounds, bath houses, toilets and other appurtenances of any bathing establishment on or near any stream, natural or artificial pond, or tidal water where bath houses for the use of the public are maintained either free or for hire. No city, town, borough,

institution, person, firm or corporation shall operate or maintain any public bathing establishment except after full and literal compliance with the following requirements:

(a) Adequate numbers of fly-tight privies or water-flushed toilets and sewage disposal systems shall be constructed and located in such a way as not to contaminate the waters used by the bathers. These accommodations shall be installed with the approval of the local director of health and shall be maintained at all times in a sanitary condition. Separate toilets for men and women shall be provided. The location of all toilets shall be plainly indicated by signs.

(b) No water supply shall be available for drinking unless of safe, sanitary quality.

(c) The dressing rooms, hallways, toilet rooms, shower rooms or other rooms to which patrons have access shall be kept clean and well ventilated at all times. The floors shall also be treated with chlorine solution or other fungicide daily. No combs or brushes for common use shall be provided for the use of patrons.

(d) All persons known or suspected of being afflicted with communicable diseases shall be excluded.

(e) No bathing suits or towels shall be furnished to patrons unless such bathing suits or towels have been thoroughly washed with soap and hot water and dried after previous use.

(f) Fly-tight depositories shall be provided where necessary for the reception of rubbish, garbage or other refuse or contaminated material and shall be maintained in a sanitary condition.

(Effective June 28, 1973)

Sec. 19-13-B37. Cross connections between water supplies prohibited

No physical connection between the distribution system of a public water system and that of any other water supply shall be permitted, unless such other water supply is of safe sanitary quality and the interconnection of both supplies is approved by the State Department of Public Health. No officer, board, corporation or other person or group of persons, owning, managing or controlling any public water system, shall provide new water service to a site where any person, firm or corporation either maintains such connection or is not in compliance with Section 19-13-B38a of the Regulations of Connecticut State Agencies at this location. Upon written order by the local health department or the Department of Public Health, an officer, board, corporation or other person or group of persons, owning, managing or controlling any public water system, shall terminate existing water service to a site where any person, firm or corporation either maintains such connection or is not in compliance with Section 19-13-B38a of the Regulations of Connecticut State Agencies at this location.

(Effective July 7, 1993; amended December 5, 2001)

Sec. 19-13-B38.

Repealed, April 8, 1980.

Sec. 19-13-B38a. Permissible arrangements for connections to public water supply lines

(a) **Definitions.** As used in this section:

(1) “Air gap” means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or outlet supplying water to a tank plumbing fixture, or other device, and the flood level rim of the receptacle. The vertical physical separation shall be at least two times the inside diameter of the water inlet pipe above the flood rim level but shall not be less than one inch;

(2) “Air vent type backflow preventer” means a device containing two independently operating check valves separated by a chamber which can automatically vent to the atmosphere if backflow occurs;

(3) “Atmospheric vacuum breaker” means a mechanical device which automatically air vents a pipeline to prevent backsiphonage;

(4) “Double check valve assembly” (DCVA) means a device which contains two independently acting check valves located between two tightly closing shut-off valves and fitted with properly located test cocks;

(5) “Fire sprinkler system” for fire protection purposes means an integrated system of underground and overhead piping designed to provide fire protection for a building or structure. The installation includes one or more automatic water supplies. The portion of the sprinkler system above-ground is a network of specially sized or hydraulically designed piping installed in a building, structure, or area generally overhead, and to which sprinklers are attached in a systematic pattern. The valve controlling each system riser is located in the sprinkler riser or its supply piping. Each sprinkler system riser includes a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area;

(6) “Hose bibb vacuum breaker” means an atmospheric vacuum breaker designed to be attached to an outlet having a hose connection thread;

(7) “Owner” means the customer of a public water system;

(8) “Pressure vacuum breaker” means a device which contains a spring loaded check valve and a spring loaded atmospheric vent which opens when the pressure approaches atmospheric. The unit shall include two tightly closing shut-off valves located at each end of the device and two test cocks properly located for testing the device;

(9) “Reduced pressure principle backflow preventer” (RPD) means a device containing within its structure a minimum of two independently acting, approved check valves, together with an automatically operating pressure differential relief valve located between the two check valves. The first check valve reduces the system pressure a predetermined amount so that during normal flow and a cessation of normal flow the pressure between the checks shall be less than the system pressure. In case of leakage of either check valve, the differential relief valve, by discharging to atmosphere, shall operate to maintain the pressure between the checks less than the system pressure. The unit shall include tightly closing shut-off valves located at each end of the device and each device shall be fitted with properly located test cocks;

(10) “Siamese connection” means an inlet equipped with one or more couplings to which a fire hose can be attached and through which water can be delivered by a fire department pumper to a sprinkler system; and

(11) “Toxic or objectionable substance” means any compound which could affect the public health, the potability, or the aesthetic quality of the water.

(b) **Air Gap.** An air gap is required between all potable water lines and equipment or systems which may be subject to contamination.

(c) **Reduced pressure principle backflow preventer.**

(1) A reduced pressure principle backflow preventer (RPD) is required on a line to all facilities where toxic or objectionable substances are used in addition to the required air gap, vacuum breaker or RPD on individual pieces of equipment unless the public water system has determined that an RPD is not necessary. Where such substances are used in a specific area, an RPD on the line to that area may be used in place of the RPD on the line to the facility.

(2) The owner shall install a reduced pressure principle backflow preventer (RPD) or an air gap in the following instances:

(A) On a line to fire sprinkler systems (including tanks) where chemicals are added or to foam fire fighting systems;

(B) On a line to pressurized water systems on ships;

(C) On a line used to supply car wash facilities where pressure is boosted;

(D) On a line to irrigation or lawn sprinkler systems where chemicals are added;

(E) On a line to all boiler systems where chemicals are added;

(F) On a line to heat exchangers where chemicals are added;

(G) On a line to solar heating systems where chemicals are added;

(H) On a line to plating tanks or areas. No potable water use will be allowed downstream of the device pursuant to section 19-13-B38a(e)(2) of the Regulations of Connecticut State Agencies.

(3) Unless otherwise required by sections 19-13-B38a(b) or 19-13-B38a(c) of the Regulations of Connecticut State Agencies, the owner shall install either an RPD or an air vent type backflow preventer or an air gap in the following instances:

(A) Water supply lines to all boiler systems where chemicals are not added;

(B) Water supply lines to carbonators for beverage machines, water conditioning systems, and commercial ice making equipment;

(C) Water supply lines connected to solar heating systems where chemicals are not added and heat exchangers where chemicals are not added;

(D) Water supply lines to storage tanks used for fire protection where chemicals are not added.

(d) **Double Check Valve Assembly.** The owner shall install a double check valve assembly (DCVA) on public water supply lines to fire sprinkler systems with siamese connections unless chemicals are added to the fire sprinkler system. Where chemicals are added to such systems, the owner shall install an RPD pursuant to Section 19-13-B38a(c)(2)(A) of the Regulations of Connecticut State Agencies. An owner may install an RPD instead of a DCVA on public water supply lines to fire sprinkler systems with siamese connections.

(e) **Vacuum breaker.** The owner shall install either an atmospheric vacuum breaker or a pressure vacuum breaker or an air gap in the following instances:

(1) Irrigation or lawn sprinkler systems where chemicals are not added;

(2) Flush valve toilets;

(3) Inlets which are or may become submerged, except where an RPD is required pursuant to section 19-13-B38a(c)(2) of the Regulations of Connecticut State Agencies;

(4) Hemodialysis units;

(5) At marinas and docks on all hose bibbs or other outlets to which a hose may be connected.

(f) **Installation and maintenance.** The devices required by section 19-13-B38a of the Regulations of Connecticut State Agencies shall be purchased, owned, installed, and maintained by the owner in compliance with the following conditions:

(1) New devices shall conform to the revision of American Water Works Association Standard C510, C511 or the revision of the applicable standard of the American Society of Sanitary Engineering in effect at the time of building permit application.

(2) There shall be no connection made for potable water use downstream of an RPD and upstream of the equipment or systems subject to contamination except where the device is installed on the service line and the required air gap, vacuum breaker, or RPD is provided on all individual pieces of equipment.

(3) Each RPD, DCVA and pressure vacuum breaker shall be located in a room or structure that is well lighted, properly drained, and not subject to flooding. These devices shall be easily accessible for repair, testing and inspection.

(4) There shall not be any bypass around a device without appropriate protection as required by Section 19-13-B38a of the Regulations of Connecticut State Agencies.

(5) If an RPD or DCVA cannot be removed from service for maintenance and testing during normal working hours, then a second device of the same type shall be installed in parallel so as to permit inspection and repair of either unit.

(6) The owner shall notify the public water system prior to the installation of any RPD, DCVA or pressure vacuum breaker required by Section 19-13-B38a of the Regulations of Connecticut State Agencies. Immediately after installation of such devices, the owner shall arrange for the public water system to have each device tested by a person who has met the requirements of Section 25-32-11(e) of the Regulations of Connecticut State Agencies.

(7) The public water system shall have each RPD, DCVA and pressure vacuum breaker tested annually and shall maintain records of the test. Any malfunctioning device shall be promptly restored to proper operating condition by the owner. A summary of the results shall be forwarded to the Department of Public Health as a part of the annual cross connection survey report. All tests must be performed by a person who has met the requirements of Section 25-32-11(e) of the Regulations of Connecticut State Agencies.

(8) Atmospheric vacuum breakers shall be located beyond the last control valve prior to the first outlet. All vacuum breakers shall be installed at an elevation higher than any outlet according to manufacturer's instructions.

(9) An atmospheric vacuum breaker shall be installed so that it is not subject to backpressure or continuous operating pressure of more than twelve (12) hours duration. Where vacuum breakers are to be installed under section 19-13-B38a(d) of the Regulations of Connecticut State Agencies and a continuous operating pressure exists, a pressure vacuum breaker shall be used.

(10) An atmospheric vacuum breaker shall be installed in such a fashion that it will not be subject to corrosion which will render it inoperative.

(11) The owner is responsible for complying with all building, plumbing, fire safety or other applicable codes, regulations or requirements.

(g) Civil Penalties.

(1) Notice of violation. When the Commissioner determines that a violation of Section 19-13-B38a(d) of the Regulations of Connecticut State Agencies has occurred or is occurring, the commissioner may so notify the violator and may impose a civil penalty in accordance with this subsection if compliance is not achieved by the date specified in the notice of violation.

(2) Appeals. Within twenty days (20) after such notice is sent by the commissioner, an owner in receipt of a notice of violation issued pursuant to this subsection may petition the commissioner in writing, by U.S. mail, certified or registered, postage prepaid, return receipt requested, for an opportunity to contest the determination that a violation occurred, the determination a violation has not been corrected, the initial date of the imposition of the penalty, and the imposition of a penalty.

(3) Penalty. Failure to install a device required pursuant to Section 19-13-B38a(d) of the Regulations of Connecticut State Agencies shall result in a penalty of not more than \$2000.

(Effective July 7, 1993; amended December 5, 2001)

Secs. 19-13-B38b—19-13-B38g.

Repealed, July 7, 1993.

Sec. 19-13-B39. Quality of water supplies made available for public and for employees

No water supply shall be used or rendered available for drinking and for other personal or domestic purposes in any industrial plan, mercantile establishment, hotel, lodging or boarding house, tenement house, hospital, theatre, park or public building, or on any outdoor or construction work, unless such supply is of safe sanitary quality

approved by the state department of health. If a water supply for industrial or fire protection purposes is obtained entirely or in part from a source not approved for drinking purposes, this supply shall be distributed through an independent piping system having no connection with the systems for drinking and for other domestic use.

Sec. 19-13-B40. Sanitation of foodstuffs

No person, firm or corporation shall sell, offer for sale or keep for sale any groceries, bakery products, confectioneries, meats, fish, vegetables or fruits except after compliance with the following requirements:

(a) All food and drink shall be clean, wholesome, free from spoilage and so prepared as to be safe for human consumption. All food and drink shall be so stored, displayed and served as to be protected from dust, flies, vermin, depredation and pollution by rodents, unnecessary handling, droplet infection, overhead leakage or other contamination. No animals or fowls shall be kept or allowed in any room in which food or drink is prepared or stored. All means necessary for the elimination of flies, roaches and rodents shall be used. All exposed food shall be stored at least eighteen inches above the floor and all food which may be contaminated by exposure when deposited at a food establishment on delivery shall be stored at least eighteen inches above the floor. Food cooking or processing operations shall be conducted in a sanitary manner.

(b) The floors, walls, windows and ceilings of rooms used for the preparation and sale of foods shall be kept clean and in good repair. During the season when flies are prevalent, all openings into the outer air shall be effectively screened and doors shall be provided to prevent the entrance of flies.

(c) All equipment shall be so installed and maintained as to facilitate the cleaning thereof, and of all adjacent areas. All equipment and utensils shall be kept clean. Equipment and utensils containing or plated with cadmium or lead shall not be used, provided solder containing lead may be used for jointing.

(d) Any food to be eaten without cooking shall not be stored directly in contact with ice. All refrigerators shall be kept in a clean and sanitary condition. All potentially hazardous food which consists in whole or in part of milk or milk products, eggs, meat, poultry, fish, shellfish, or other ingredients capable of supporting the rapid and progressive growth of infectious or toxigenic microorganisms, shall be maintained at safe temperatures at 45°F. or below, or 140°F. or above, except during necessary periods of preparation.

(e) All oysters, clams and mussels shall be from approved sources and, if shucked, shall be kept until sold in the containers in which they were placed at the shucking or packing plant.

(f) All drinking beverages (not bottled) shall be kept in fly-tight containers, from which the liquid may be removed only by faucets. The pouring lips of bottles or containers of milk or other beverages shall not be submerged for cooling.

(g) No decayed fruits, meats, fish, vegetables or other foods shall be allowed to remain in any receptacle wherein any fruits, meats, fish, vegetables or other foods intended for human consumption are kept for sale or other disposition. All garbage and rubbish containing food wastes shall, prior to disposal, be kept in a leak-proof, non-absorbent container which shall be kept covered with tight fitting lids when filled or stored, or not in continuous use; provided such containers need not be covered when stored in a vermin-proofed room or enclosure, or in a food waste refrigerator. All other rubbish shall be stored in containers, rooms or areas in an

approved manner. The rooms, enclosures, areas and containers used shall be adequate for the storage of all food waste and rubbish accumulating on the premises. Adequate cleaning facilities shall be provided, and each container, room or area shall be thoroughly cleaned after the emptying or removal of garbage and rubbish. Food waste grinders, if used, shall be installed in compliance with state and local standards and shall be of suitable construction. All garbage and rubbish shall be disposed of with sufficient frequency and in such a manner as to prevent a nuisance.

(h) Any water supply available for drinking or for washing dishes or food-handling equipment or for hand-washing shall be of safe sanitary quality. Each establishment shall be provided with adequate conveniently located handwashing facilities for its employees within or immediately adjacent to all toilet rooms, equipped with hot and cold or tempered running water, hand cleansing soap or detergent dispensed in a sanitary manner, and approved sanitary towels or other approved hand drying device. Such facilities shall be kept clean and in good repair. The use of a common towel is prohibited. No employee shall resume work after using the toilet room without first washing his hands. In establishments constructed after October 8, 1963, and establishments which are extensively altered after said date, separate handwashing facilities shall also be located within the room where food is prepared.

(i) Each establishment shall be provided with adequate, conveniently located toilet facilities for its employees. Toilet facilities, including rooms and fixtures, shall be sanitary and readily cleaned and shall be kept in a clean condition and in good repair. The doors of all toilet rooms shall be self-closing. Toilet tissue shall be provided. Easily cleaned receptacles shall be provided for waste materials, and such receptacles in toilet rooms for women shall be covered.

(j) All parts of the establishment and its premises shall be kept neat, clean and free of litter and rubbish. Cleaning operations shall be conducted in such a manner as to minimize contamination of food and food contact surfaces. None of the operations connected with a food service establishment shall be conducted in any room used as living or sleeping quarters.

(Effective October 8, 1963)

Sec. 19-13-B41. Sanitation of public fair grounds, horse shows, horse races, and automobile races

No public fair grounds or grounds for horse shows, horse races and automobile races shall be used except after compliance with the following requirements:

(a) **Water supply.** Any water supply available for drinking or washing dishes shall be of safe sanitary quality. Any water found unsafe for human consumption on such grounds shall be either eliminated or purified by a process approved by the state department of health or shall be kept posted with placards definitely warning persons against its use. A safe water supply and handwashing and hand drying facilities shall be provided for the public where food is served.

(b) **Disposal of excreta.** Fly-tight privies or water-flushed toilets with a system of sewage disposal approved by the state department of health shall be provided and shall be maintained in a clean and sanitary condition. Separate installations for men and for women shall be provided and they shall be adequate for the accommodation of all persons attending or using the grounds. The location of all toilets shall be plainly indicated by signs.

(c) **Disposal of refuse.** Supervision and equipment sufficient to prevent littering of the ground with rubbish, garbage or other refuse shall be provided and maintained. Fly-tight depositories for such materials shall be provided and conspicuously located.

Such depositories and any final places of disposition shall not be permitted to become foul-smelling or unsightly or breeding places for flies.

(d) **Storage and service of food.** All food and drink while being stored, prepared, displayed, served or sold, or during transportation, shall be protected from dust, flies, depredation and pollution by rodents, unnecessary handling, droplet infection, overhead leakage or other contamination. Raw fruits and vegetables shall be washed before use. All single service eating and drinking articles shall be made from nontoxic materials, and shall have been manufactured, packaged, transported, stored, handled and dispensed in a sanitary manner, and shall be used only once. Drinking straws or any other device, hollow in nature, whereby through its use a beverage can be drawn into the mouth shall be separately wrapped either individually or in pairs with a sanitary protective covering for individual use. All multi-use eating and drinking utensils shall be thoroughly washed and rinsed and sanitized after each use.

(e) **Drinking beverage.** All drinking beverages not bottled shall be kept in fly-tight containers, from which the liquid may be removed only by faucets. The pouring lips of bottles or containers of milk or other beverages shall not be submerged for cooling.

(Effective April 11, 1973)

Sec. 19-13-B42. Sanitation of places dispensing foods or beverages

No person, firm or corporation shall operate or maintain within the State of Connecticut any place where food or beverages are served to the public except in compliance with the following requirements:

(a) Definitions, as used in this section:

(1) "Authorized agent" means any individual certified by the commissioner to inspect food service establishments and enforce the provisions of section 19-13-B42 of the Regulations of Connecticut State Agencies under the supervision and/or authority of the director of health.

(2) "Comminuted" means reduced in size by methods including chopping, flaking, grinding, or mincing and includes fish or meat products that are reduced in size and restructured or reformulated such as gefilte fish, gyros, ground beef and sausage.

(3) "Commissioner" means the commissioner of public health.

(4) "Department" means the state of Connecticut Department of Public Health.

(5) "Director of health" means the director of a local health department or district health department approved by the commissioner as specified in Connecticut general statutes sections 19a-200 and 19a-242, respectively.

(6) "Food employee" means an individual working with unpackaged food, food equipment or utensils, or food-contact surfaces.

(7) "Food service establishment" means any place where food is prepared and intended for individual portion service and includes the site at which individual portions are provided. The term includes any such place regardless of whether consumption is on or off the premises and regardless of whether there is a charge for the food. The term does not include a kitchen in a private home where food is prepared or served and not offered for sale, or a bed-and-breakfast operation that prepares and offers food to the guests if such operation is owner occupied and has the total building occupant load of not more than 16 persons including the owner and occupants, and has no provisions for cooking or warming food in the guest rooms, and breakfast is the only meal offered, and placards are posted at the registration area which read "this establishment is exempt from section 19-13-B42 of the regulations of the public health code."

(8) “Full-time position” means thirty (30) hours per week or the number of hours per week that the food service establishment is open for business, whichever is less.

(9) “Hazard analysis” means an evaluation of food handling operations to identify points of potential product contamination and assess the adequacy of hot processing and hot and cold storage methods for foods.

(10) “Potentially hazardous food” means any food or food ingredient, natural or synthetic, that is in a form capable of supporting:

- (A) the rapid and progressive growth of infectious or toxigenic microorganisms, or
- (B) the slower growth of *Clostridium botulinum*.

(11) “Qualified food operator” means a food operator employed in a full-time position who has demonstrated a knowledge of safe food handling techniques.

(12) “Ready-to-eat food” means food that is in a form that is edible without washing, cooking, or additional preparation by the food service establishment or the consumer and that is reasonably expected to be consumed in that form.

(13) “Supervisory position” means the position of a person who directs and inspects the performance of food service workers.

(14) “Temporary food service establishment” means a food service establishment that operates at a fixed location for a temporary period of time, not to exceed two (2) weeks, in connection with a carnival, circus, public exhibition, festival, celebration, or similar transitory gathering.

(b) The floor surfaces in kitchens, in all other rooms and areas in which food or drink is stored or prepared, in which multi-use utensils are washed, and in walk-in refrigerators, dressing or locker rooms and toilet rooms, shall be of smooth nonabsorbent materials, and so constructed as to be easily cleaned. The floors of nonrefrigerated dry food storage areas need not be nonabsorbent. All floors shall be kept clean and in good repair. Floor drains shall be provided in all rooms where floors are subjected to flooding type cleaning or where normal operations release or discharge water or other liquid waste on the floor. No sawdust or similar material shall be spread on the floors. All exterior areas where food is served shall be kept clean and properly drained, and the surfaces in such areas shall be finished so as to facilitate maintenance and minimize dust.

(c) The walls and ceilings of all rooms shall be kept clean and in good repair. All walls of rooms or areas in which food or drink is prepared, or multi-use utensils or hands are washed, shall be easily cleanable, smooth, light colored, and shall have washable surfaces up to the level reached by splash or spray.

(d) (1) Effective measures shall be taken to protect against the entrance into the establishment or breeding on the premises of insects, rodents and other animals by:

- (A) filling or closing holes and other gaps along floors, walls, and ceilings,
- (B) closed, tight-fitting windows, and
- (C) solid self-closing, tight-fitting doors; or

(2) if windows or doors are kept open for ventilation or other purposes, the openings shall be protected against the entrance of insects, rodents or other animals by:

- (A) 16 mesh to 25.4 mm (16 mesh to 1 inch) screens,
- (B) properly designed and installed air curtains, or

(C) other methods which are submitted for review and approval by the local director of health. The submission of an alternative method to those listed in (A) and (B) of this subdivision for review by the director of health shall be accompanied by documentation which the director of health finds demonstrates that the method

will be as effective in preventing the entrance of insects and rodents or other animals as those listed in (A) and (B) of this subdivision.

(3) Subdivision (2) of this subsection does not apply if flying insects and other pests are absent due to the location of the establishment, the weather, or other limiting condition.

(e) All areas in which food or drink is prepared or stored or multi-use utensils are washed, handwashing areas, dressing or locker rooms, toilet rooms and garbage and rubbish storage areas shall be well lighted. During all cleanup activities, adequate light shall be provided in the area being cleaned and upon or around equipment being cleaned. All rooms in which food or drink is prepared or served or multi-use utensils are washed, dressing or locker rooms, toilet rooms, and garbage and rubbish storage areas shall be well ventilated. Ventilation hoods and devices shall be designed to prevent grease or condensate from dripping into food or onto food preparation surfaces. Filters, where used, shall be readily removable for cleaning or replacement. Ventilation systems shall comply with applicable state and local fire prevention requirements and shall, when vented to the outside air, discharge in such a manner as not to create a nuisance.

(f) Each food service establishment serving food or drink shall be provided with adequate, conveniently located toilet facilities for its employees. Toilet fixtures shall be sanitary and readily cleanable. Toilet facilities, including rooms and fixtures, shall be kept in a clean condition and in good repair. The doors of all toilet rooms shall be self-closing. Toilet room walls shall be tight and extend from floor to ceiling. Toilet tissue shall be provided. Easily cleanable receptacles shall be provided for waste materials, and such receptacles in toilet rooms for women shall be covered. Toilet and handwashing facilities accessible to the public shall be provided in conformance with sections 19-13-B105 through 19-13-B113 of the Regulations of Connecticut State Agencies. Where the use of non-water-carried sewage disposal facilities has been approved by the local director of health, such facilities shall be separate from the food service establishment. All sewage shall be disposed of in a public sewerage system or, in the absence thereof, in a manner approved by the local director of health. Plumbing shall be so sized, installed and maintained as to prevent contamination of the water supply; as to properly convey sewage and liquid wastes from the food service establishment to the sewerage or sewage disposal system; and as not to constitute a source of contamination of food equipment or multi-use utensils, or create an insanitary condition or nuisance.

(g) The water supply shall be adequate, of a safe, sanitary quality, be in conformance with section 19-13-B102 of the Regulations of Connecticut State Agencies and be from an approved source which is in conformance with sections 19-13-B51A through 19-13-B51M of the Regulations of Connecticut State Agencies. Hot and cold running water under pressure shall be provided in all areas where food or drink is prepared or equipment, multi-use utensils or containers are washed. Hot water supplied in all areas where food or drink is prepared and where multi-use utensils and equipment are washed, and for other general purposes shall be maintained at a temperature of at least one hundred and ten (110) degrees F. through a mixing valve or combination faucet. Hot water supplied at hand washing sinks available to the public shall be in conformance with section 19-13-B111 of the Regulations of Connecticut State Agencies. Ice used for any purpose shall be made from water which comes from an approved source; and shall be used only if it has been manufactured, stored, transported, and handled in a sanitary manner.

(h) Each food service establishment serving food or drink shall be provided with handwashing facilities located to allow for convenient use by employees in food

preparation, food dispensing, and warewashing areas, and within or immediately adjacent to all toilet rooms. The handwashing facilities shall be equipped with hot and cold or tempered running water, hand cleansing soap or detergent dispensed in a sanitary manner, individual disposable towels or other hand drying device acceptable to the director of health. The use of a common towel is prohibited. A handwashing facility shall not be used for purposes other than handwashing. The handwashing facilities shall be maintained so that they are accessible at all times for employee use. Such facilities shall be kept clean and in good repair. No employee shall resume work after using the toilet room without first washing his hands.

(i) All equipment and multi-use utensils, and all show and display cases or window counters, shelves, tables, chairs, and refrigerating equipment shall be so designed and of such material and workmanship as to be smooth, easily cleanable and durable and shall be in good repair. The food contact surfaces of such equipment and utensils shall, in addition, be easily accessible for cleaning, nontoxic, corrosion-resistant and relatively nonabsorbent. Sinks, dishtables and drainboards shall be constructed of galvanized metal or better, suitably reinforced, of such thickness and design as to resist denting and buckling, and sloped so as to be self-draining. Exceptions approved by the local director of health may be made to the above material requirements for equipment such as cutting boards, blocks and bakers' tables and containers for dry products.

(j)(1) All equipment shall be so installed and maintained as to facilitate the cleaning thereof and of all adjacent areas.

(2) Equipment in use on October 15, 1963, which does not fully meet the above requirements may be continued in use if it is in good repair, capable of being maintained in a sanitary condition and the food contact surfaces are nontoxic. Utensils containing or plated with cadmium or lead shall not be used, provided solder containing lead may be used for jointing. All cloths and towels used by waiters, chefs and other employees shall be clean.

(3) All multi-use eating and drinking utensils shall be thoroughly washed and rinsed and sanitized after each use, in accordance with the following approved sanitizing processes.

(A) When manual dishwashing is used, a three-compartment sink shall be provided and used wherever washing, rinsing, and sanitization of equipment or utensils are conducted; provided, that in food service establishments where the only utensils to be washed are limited to spatulas, tongs, and similar devices, and when the only equipment to be cleaned is stationary and does not require disassembly for proper cleaning, a two-compartment sink may be approved by the director of health for this purpose. At least a two-compartment sink shall be provided and used for washing kitchenware and equipment which does not require sanitization. A warewashing sink shall not be used for handwashing or dumping mop water. Sinks used to wash or thaw food shall be sanitized before and after using the sink to wash produce or thaw food. Utensils after thorough washing and rinsing, clean to sight and touch, shall be sanitized by:

(i) Immersion for at least one (1) minute in clean, hot water at a temperature of at least one hundred and seventy (170) degrees F. An approved thermometer shall be available convenient to the vat. The pouring of scalding water over the washed utensils shall not be accepted as satisfactory compliance; or

(ii) Immersion for at least one (1) minute in a sanitizing solution containing: at least fifty (50) mg/l of available chlorine at a temperature of not less than seventy-five (75) degrees F. The bath should be made up to a strength of one hundred (100)

mg/l or more of available chlorine and shall not be used after its strength has been reduced to fifty (50) mg/l; or at least twelve and one-half (12.5) mg/l of available iodine in a solution having a pH value not higher than five (5.0) and a temperature of not less than seventy-five (75) degrees F.; or any other chemical sanitizing agent that has been demonstrated to the satisfaction of the director of health to be effective and nontoxic under use conditions, and for which a suitable field test is available. Such sanitizing agents, in solutions used, shall provide the equivalent bactericidal effect of a solution containing at least fifty (50) mg/l of available chlorine at a temperature not less than seventy-five (75) degrees F.

(B) When dishwashing is done by machine hot water for sanitizing may be used provided that:

(i) Wash water shall be kept clean, and rinse-water tanks shall be so protected by distance, baffles or other effective means as to minimize the entry of wash water into the rinse water. All water inlets shall be protected against backflow.

(ii) The flow pressure shall be not less than fifteen (15) or more than twenty-five (25) pounds per square inch on the water line at the machine, and not less than ten (10) pounds per square inch at the rinse nozzles. A suitable gauge cock shall be provided immediately upstream from the final rinse sprays to permit checking the flow pressure of the final rinse water.

(iii) The temperature of the wash water shall not be less than:

(a) One hundred and sixty-five (165) degrees F. for a single temperature stationary rack machine;

(b) One hundred and sixty (160) degrees F. for a single tank, conveyor, dual temperature machine;

(c) One hundred and fifty (150) degrees F. for a single tank, stationary rack, dual temperature machine; and

(d) One hundred and fifty (150) degrees F. for a multitank, conveyor, multitemperature machine.

When hot water is relied upon for sanitization in a mechanical warewashing operation, the temperature of the fresh hot water sanitizing rinse as it enters the manifold shall not be less than one hundred and sixty-five (165) degrees F. for a stationary rack, single temperature machine; or one hundred and eighty (180) degrees F. for all other machines. The temperature of the fresh hot water sanitizing rinse shall not be more than one hundred and ninety-four (194) degrees F. as it enters the manifold. The item being sanitized shall attain a temperature of one hundred and sixty (160) degrees F. on its surface during the final rinse. When a pumped rinse is provided, the water shall be at a temperature of at least one hundred and sixty (160) degrees F.

(iv) Conveyors in dishwashing machines shall be accurately timed to assure proper exposure times in wash and rinse cycles.

(v) An easily readable thermometer shall be provided in each tank of the dishwashing machine which will indicate the temperature of the water or solution therein. In addition, a thermometer shall be provided which will indicate the temperature of the final rinse water as it enters the manifold.

(vi) Jets, nozzles and all other parts of each machine shall be maintained free of chemical deposits, debris and other soil. Automatic detergent dispensers, if used, shall be kept in proper operating condition.

(C) Dishwashing may be done by machines using chemicals for sanitization provided:

(i) The machines, chemical sanitizer, and method of drying utensils are approved by the commissioner.

(ii) The temperature of the wash water shall not be less than one hundred and twenty (120) degrees F.; and

(iii) the wash water shall be kept clean; and

(iv) Adequate amounts of chemicals for washing, sanitizing, and drying shall be available. Chemicals added for washing, sanitization, and drying purposes shall be automatically dispensed, compatible, not interfering with the effective purpose of each other; and

(v) Utensils and equipment shall be exposed to the final chemical sanitizing rinse in accordance with the manufacturer's specifications for time and concentration; and

(vi) The chemical sanitizing rinse water temperature shall be not less than seventy-five (75) F. nor less than the temperature specified by the machine's manufacturer; and

(vii) A test kit or other device that accurately measures the parts per million concentration of the solution shall be available and used.

(4) All kitchenware and food contact surfaces of equipment that have been used in the preparation or serving of food and drink, and all multi-use food storage utensils, exclusive of cooking surfaces of equipment, shall be thoroughly cleaned at least every four (4) hours. Cooking surfaces of equipment shall be cleaned at least once a day. All food temperature measuring devices, multi-use utensils and food contact surfaces of equipment used in the preparation or storage of potentially hazardous food shall be thoroughly cleaned and sanitized prior to such use and following: a change from working with raw animal foods to working with ready-to-eat foods; a change in the type of raw animal food such as beef, fish, lamb, pork, or poultry; use with raw fruit or vegetables prior to use with potentially hazardous food; and at any time during the operation when contamination may have occurred. Unless approved by the director of health for a different frequency of cleaning, equipment, food contact surfaces and utensils that have been used with potentially hazardous food shall be cleaned and sanitized at least every four (4) hours.

Non-food contact surfaces of equipment shall be cleaned at such intervals as to keep them in a clean and sanitary condition.

(5) No article, polish, or other substance containing any cyanide preparation or other poisonous material shall be used for the cleaning or polishing of utensils.

(k) After cleaning and until use, all food contact surfaces of equipment and multi-use utensils shall be so stored and handled as to be protected from contamination. All single-service eating and drinking articles shall be made from nontoxic materials, and shall have been manufactured, packaged, transported, stored, handled and dispensed in a sanitary manner, and shall be used only once. Drinking straws or any other device, hollow in nature, whereby through its use a beverage can be drawn into the mouth shall be separately wrapped either individually or in pairs with a sanitary protective covering for individual use. Food service establishments which do not have adequate and effective facilities for cleaning and sanitizing multi-use utensils shall use single-service articles.

(l) All garbage and rubbish containing food wastes shall, prior to disposal, be kept in a leak-proof, nonabsorbent container which shall be kept covered with tight fitting lids when filled or stored, or not in continuous use; provided such containers need not be covered when stored in a vermin-proofed room or enclosure or in a food waste refrigerator. All other rubbish shall be stored in containers, rooms or areas in a manner approved by the director of health. The rooms, enclosures, areas

and containers used shall be adequate for the storage of all food waste and rubbish accumulating on the premises. Adequate cleaning facilities shall be provided, and each container, room or area shall be thoroughly cleaned after the emptying or removal of garbage and rubbish. Food waste grinders, if used, shall be installed in compliance with state and local standards and shall be of suitable construction. All garbage and rubbish shall be disposed of with sufficient frequency and in such a manner as to prevent a nuisance.

(m)(1) Except during necessary periods of preparation and service, potentially hazardous foods shall be maintained at forty-five (45) degrees F. or below, or one hundred forty (140) degrees F. or above, except beef roasts and pork roasts cooked to an internal temperature and time specified below may be held hot at one hundred thirty (130) degrees F. or above. The use of time only, rather than time in conjunction with temperature, may be permitted by the director of health and may be used as a public health control for a working supply of potentially hazardous food before cooking, or for ready-to-eat potentially hazardous food that is displayed or held for service for immediate consumption if: the food is marked or otherwise identified with the time within which it shall be cooked, served, or discarded; the food is served or discarded within 4 hours from the point in time when the food is removed from temperature control; the food in unmarked containers or packages, or for which time expires, is discarded; and written procedures that assure compliance are maintained in the food service establishment and are made available to the authorized agent upon request. Except as specified raw food shall be cooked as follows:

(A) Whole roasts, corned beef, and pork roasts shall be cooked to heat all parts of the food to the following minimum temperatures and corresponding minimum holding times: one hundred thirty (130) degrees F. for one hundred twenty-one (121) minutes; or one hundred forty (140) degrees F. for twelve (12) minutes; or one hundred forty-five (145) degrees F. for three (3) minutes;

(B) Shell eggs, fish, meat and pork (other than whole roasts, corned beef, and pork roasts) shall be cooked to heat all parts of the food to at least one hundred forty-five (145) degrees F. for fifteen (15) seconds;

(C) All meat and fish products that are ground or comminuted shall be cooked to heat all parts of the food to at least one hundred and forty-five (145) degrees F. for three (3) minutes, one hundred and fifty (150) degrees F. for one (1) minute, one hundred and fifty-five (155) degrees F. for fifteen (15) seconds, or one hundred and fifty-eight (158) degrees F. instantaneously;

(D) Game meats, poultry, ground or comminuted poultry, stuffed fish, stuffed meat, stuffed pasta, stuffed poultry, or stuffing containing potentially hazardous food ingredients shall be cooked to heat all parts of the food to at least one hundred sixty-five (165) degrees F. for fifteen (15) seconds;

(E) Raw animal foods cooked in a microwave oven shall be: rotated or stirred throughout or midway during cooking to compensate for uneven distribution of heat; covered to retain surface moisture; heated to a temperature of at least one hundred sixty-five (165) degrees F. in all parts of the food; and allowed to stand covered for two (2) minutes after cooking to obtain temperature equilibrium;

(F) Pasteurized eggs or egg products shall be substituted for raw shell eggs in the preparation of foods that are not thoroughly cooked such as caesar salad, salad dressing; hollandaise or bearnaise sauce, mayonnaise, egg nog, ice cream, egg-fortified beverages, and in recipes requiring pooled eggs that are not cooked immediately. Exempted from the above is a raw animal food such as raw egg, raw fish, raw-marinated fish; raw molluscan shellfish; steak tartare; or partially cooked food

such as lightly cooked fish, rare meat, and soft cooked egg that is served or offered for sale in a ready-to-eat form. Pork and poultry products are not exempt from the required cooking times and temperatures. The consumer shall be informed of the risks involved with the consumption of raw or undercooked animal food by means of posters, brochures, menu advisories, label statements, table tents, placards, or other written means available at the food service establishment which state: "thoroughly cooking meats, poultry, seafood, shellfish, or eggs reduces the risk of foodborne illness." Exemptions to the food temperature requirements shall not be allowed at food service establishments serving highly susceptible populations such as immunocompromised individuals or older adults in hospitals, nursing homes, or similar health care facilities as listed in Connecticut General Statutes section 19a-490 and that are subject to this section and preschool age children in a facility that provides custodial care and is subject to this section such as child day care centers as defined in Connecticut General Statutes section 19a-77(a)(1).

(2) Frozen food shall be kept at such temperatures as to remain frozen, except when being thawed for preparation or use. Potentially hazardous frozen food which consists in whole or in part of milk or milk products, eggs, meat, poultry, fish, shellfish, or other ingredients capable of supporting the rapid and progressive growth of infectious or toxigenic microorganisms, shall be thawed at refrigerator temperatures of forty-five (45) degrees F. or below; or under cool, potable running water seventy (70) degrees F. or below; or quick thawed as part of the cooking process; or by any other method satisfactory to the local director of health. Waste water from refrigeration equipment shall be disposed of in a proper manner.

(3) Cooked potentially hazardous foods shall be cooled from one hundred forty (140) degrees F. to seventy (70) degrees F. within two (2) hours, and from seventy (70) degrees F. to forty-five (45) degrees F. or below within four (4) additional hours. Potentially hazardous food that is cooked, cooled, and reheated for hot holding shall be reheated so that all parts of the food reach a temperature of at least one hundred sixty-five (165) degrees F. for fifteen (15) seconds, provided that remaining unsliced portions of roasts of beef that are cooked as specified in this subsection may be reheated for hot holding to one hundred forty-five (145) degrees F. for three (3) minutes. Reheating for hot holding shall be done within two (2) hours. Ready-to-eat food taken from a commercially processed, hermetically sealed container shall be heated to a temperature of at least one hundred forty (140) degrees F. for hot holding. Cooked, cooled, and refrigerated food that is prepared for immediate service in response to an individual consumer order may be served at any temperature.

(4) Food temperature measuring devices shall be provided and be readily accessible for use in ensuring attainment and maintenance of proper food temperatures. Food temperature measuring devices shall be accurate to \pm two (2) degrees F.

(n) All food and drink in food service establishments shall be from sources approved or considered satisfactory by the director of health, based on a determination of conformity with principles, practices, and generally recognized standards that protect public health; shall be in compliance with applicable state and local laws and regulations; shall be transported and delivered at required temperatures; and shall be clean, wholesome, free from spoilage, free from adulteration and misbranding and safe for human consumption. Any food or drink considered unsafe for human consumption shall be destroyed or disposed of in a manner satisfactory to the director of health. No hermetically sealed, non-acid or low-acid food which has been processed in a place other than a commercial food processing establishment shall be used.

Molluscan shellfish shall be from sources listed in the most recent publication of the interstate certified shellfish shippers list distributed by the Federal Food and Drug Administration and approved or considered acceptable by the Connecticut Department of Agriculture, Bureau of Aquaculture, and, if shucked, shall be kept until used in the containers in which they were received. Shell stock tags or labels shall be retained for 90 days from the date the container is emptied. Finfish shall be commercially and legally caught or harvested. Fluid milk and milk products shall be pasteurized and conform to Grade A standards, the requirements of the United States Public Health Service, Food and Drug Administration "Grade A Pasteurized Milk Ordinance" and "Grade A Condensed Milk Ordinance." Shell eggs shall be from commercial, regulated sources inspected according to law and shall be received clean and sound, and shall be graded as required by law.

(o)(1) All food and drink while being stored, prepared, displayed, served or sold at food service establishments, or during transportation between such establishments, shall be protected from dust, flies, vermin, depredation and pollution by rodents, unnecessary handling, droplet infection, overhead leakage or other contamination. Raw fruits and vegetables shall be washed before use. If used, single-use gloves shall be used for only one task such as working with ready-to-eat food or with raw animal food, used for no other purpose, and discarded when damaged or soiled, or when interruptions occur in the operation.

(2) Food once served to the customer shall not be served again. Wrapped non potentially hazardous food which has not been unwrapped and which is wholesome may be re-served.

(3) All means necessary for the elimination of flies, roaches and rodents shall be used. All exposed food shall be stored at least eighteen (18) inches above the floor.

(4) Only such poisonous and toxic materials as are required to maintain sanitary conditions and for sanitization purposes may be used or stored in food service establishments. Poisonous and toxic materials shall be identified and shall be stored and used only in such manner and under such conditions as will not contaminate food and drink or constitute a hazard to employees or customers.

(p)(1) Food employees shall wear clean outer garments, maintain a high degree of personal cleanliness and conform to hygienic practices. Food employees shall keep their fingernails trimmed, filed, and maintained so the edges and surfaces are cleanable and not rough. Food employees shall keep their fingers, nails, hands, and exposed portions of their arms clean by using a cleaning compound to lather hands and arms for at least 20 seconds, followed by thorough rinsing with clean water in a handwashing facility, and hand drying using approved sanitary towels or other approved hand drying device. Employees shall wash their hands thoroughly in an approved handwashing facility before starting work. Food employees shall clean their hands and exposed portions of their arms as often as may be required to remove soil and contamination; after touching bare human body parts; after using the toilet room; after caring for assistance animals; after coughing, sneezing, using a handkerchief or disposable tissue, using tobacco, eating, or drinking; after handling soiled equipment or utensils; when changing gloves; after handling money; immediately before engaging in food preparation including working with exposed food, clean equipment and utensils, and unwrapped single-service and single-use articles; during food preparation as often as necessary to remove soil and contamination and to prevent cross contamination when changing tasks; when switching between working with raw foods and ready-to-eat foods; and after engaging in other activities that contaminate the hands. Employees shall not expectorate in rooms in which

food is prepared. All persons, while working in direct contact with food preparation, food ingredients or surfaces coming into contact therewith shall wear hairnets, headbands, caps or other effective hair restraints. Employees shall not use tobacco in any form while engaged in food preparation or service, or while in equipment and multi-use utensil washing or food preparation areas. Designated locations in such areas may be approved by the local director of health for smoking, where no contamination hazards will result.

(2) Smoking is prohibited in all indoor public areas of a food service establishment. Signs shall be posted at each entrance stating that smoking is prohibited by state law.

(3) Outdoor seating areas maintained for the service of food that have no roof or other ceiling enclosure and that have a permit to sell alcoholic liquor shall have at least seventy-five per cent of the outdoor seating capacity in an area in which smoking is prohibited and such area shall be designated with written signage as a nonsmoking area.

(4) Outdoor temporary seating areas established for special events and not used on a regular basis shall not be subject to the smoking prohibition or signage requirements of this subsection.

(5) Outdoor seating areas of establishments that do not serve alcohol shall not be subject to the smoking prohibition or signage requirements of this subsection.

(q)(1) All parts of the establishment and its premises shall be kept neat, clean and free of litter and rubbish. Cleaning operations shall be conducted in such a manner as to minimize contamination of food and food contact surfaces. None of the operations connected with a food service establishment shall be conducted in any room used as living or sleeping quarters. Soiled linens, coats and aprons shall be kept in suitable containers until removed for laundering. No live birds or animals shall be allowed in any area used for the storage, preparation or serving of food, or for the cleaning or storage of utensils, or in toilet rooms or employees' dressing rooms or areas, in vehicles used for transporting food, or in any other area or facility used in the conduct of food service establishment operations; provided guide dogs or assistance dogs accompanying blind, deaf, or mobility impaired persons and dogs accompanying persons training such dogs as guide or assistance dogs as defined pursuant to the Connecticut General Statutes Sections 46a-42 and 46a-44, may be permitted in dining rooms.

(2) Adequate facilities shall be provided for the orderly storage of employees' clothing and personal belongings. Where employees routinely change clothes within the food service establishment, one (1) or more dressing rooms or designated areas shall be provided for this purpose. Such designated areas shall be located outside of the food preparation, storage and serving areas, and the multi-use utensil washing and storage areas. When approved by the local director of health, such an area may be located in a storage room where only completely packaged food is stored. Such designated areas or dressing rooms shall be equipped with adequate lockers or other suitable facilities. Dressing rooms and lockers shall be kept clean and orderly.

(r) No person while affected with any disease in a communicable form, or while a carrier of such disease, or while afflicted with boils, infected wounds, sores or an acute respiratory infection, shall work in any area of a food service establishment in any capacity in which there is a likelihood of such person contaminating food, drink or food contact surfaces with pathogenic organisms, or transmitting disease to other individuals; and no person known or suspected of being affected with any such disease or condition shall be employed in such an area or capacity. If the management of the food service establishment has reason to suspect that any

employee has contracted any disease in a communicable form or has become a carrier of such disease, he shall notify the local director of health immediately. When the local director of health has reasonable cause to suspect possibility of disease transmission from any food service establishment employee, such director shall secure a morbidity history of the suspected employee, or make such other investigation as may be indicated, and take appropriate action. The director of health may require any or all of the following measures:

- (1) the immediate exclusion of the employee from all food service establishments;
- (2) the immediate closure of the food service establishment concerned until, in the opinion of the director of health, no further danger of disease outbreak exists;
- (3) restriction of the employee's services to some area of the food service establishment where there would be no danger of transmitting disease; and
- (4) adequate medical and laboratory examinations of the employee, or other employees, and of his and their body discharges; and
- (5) food employees shall not contact exposed ready-to-eat food with bare hands and shall use suitable utensils such as deli tissue, spatulas, tongs, single use disposable gloves or dispensing equipment, except when washing raw fruits and vegetables to remove soil and other contaminants. Food employees shall minimize bare hand contact with exposed food that is not in a ready-to-eat form. Ready-to-eat food includes: unpackaged potentially hazardous food that is cooked to the temperatures and time required for the specific food under section 19-13-B42(m)(1); raw, washed, cut fruits and vegetables; whole, raw fruits and vegetables that are presented for consumption without the need for further washing, such as at a buffet; and other food presented for consumption for which further washing or cooking is not required and from which rinds, peels, husks, or shells are removed.

(s)(1) No person, firm or corporation shall operate or maintain any place where food or beverages are served to the public within any town, city or borough, without a local permit or license, or otherwise without registration of the name and business address with the local director of health of the town, city or borough in which the business is conducted, if such permit or license is required by local ordinance. Permits for temporary food service establishments shall be issued for a period of time not to exceed fourteen (14) days.

(2) A temporary food service establishment serving food or drink shall comply with all provisions of this section which are applicable to its operation. The local director of health may augment such requirements when needed to assure the service of safe food, may prohibit the sale of potentially hazardous food or drink consisting in whole or in part of milk or milk products, eggs, meat, poultry, fish, shellfish, or other ingredients capable of supporting the rapid and progressive growth of infectious or toxigenic microorganisms, or may modify specific requirements for physical facilities when in his opinion no health hazard will result.

(3) Food service establishment classification. The director of health, registered sanitarian, or authorized agent shall classify each food service establishment by using the criteria outlined in this subdivision. Establishments shall be classified at the time of licensure, where licensure is required by local ordinance, or otherwise at the time of registration with the local director of health. The classification shall be reviewed by the director of health, registered sanitarian, or authorized agent during each inspection and in no case less than annually. The food service establishment shall be placed into the highest classification that describes any of the food operations conducted. When it comes to the attention of the director of health, registered sanitarian, or authorized agent that the food service establishment has

changed to a different class the director of health, registered sanitarian, or authorized agent shall reclassify that food service establishment. No food service establishment shall change operations to a different classification without prior written approval by the director of health, registered sanitarian, or authorized agent. The classes of food service establishments are as follows:

(A) Class I is a food service establishment with commercially prepackaged foods and/or hot or cold beverages only. No preparation, cooking or hot holding of potentially hazardous foods is included except that commercially packaged precooked foods may be heated and served in the original package within four (4) hours.

(B) Class II is a food service establishment using cold or ready-to-eat commercially processed food requiring no further heat treatment and/or hot or cold beverages. No cooking, heating or hot holding of potentially hazardous foods is included, except that commercially packaged precooked foods may be heated and served in the original package within four (4) hours, and commercially precooked hot dogs, kielbasa and soup may be heated if transferred directly out of the original package and served within four (4) hours.

(C) Class III is a food service establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and consumed by the public within four (4) hours of preparation.

(D) Class IV is a food service establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and held for more than four (4) hours prior to consumption by the public.

(4) Qualified food operator required. Each person owning, operating or managing any food service establishment designated either as class III or class IV shall be a qualified food operator or shall employ on-site at least one (1) qualified food operator who is in a supervisory position at said establishment. Each food service establishment shall be in compliance with this subdivision by August 1, 1997. Satisfactory evidence of compliance with this subdivision shall be documentation that the qualified food operator has passed a test administered by a testing organization approved by the department, or other documentation satisfactory to the department attesting to the individual's knowledge of safe food handling techniques as specified in subdivision (6) of this subsection. Said documentation shall be maintained on file at the food service establishment and provided to the local director of health, registered sanitarian, or authorized agent on request. Any person who serves meals to individuals at registered congregate meal sites funded under Title III of the Older Americans Act of 1965, as amended, which were prepared under the supervision of a qualified food operator, shall be exempt from the examination requirement for qualified food operators. Any volunteer who serves meals for a nonprofit organization shall be exempt from the examination requirement for qualified food operators. Exempt from the requirements of this subdivision are: temporary food service establishments and special events sponsored by non-profit civic organizations such as, but not limited to, school sporting events, little league food booths, church suppers, and fairs. Soup kitchens that rely exclusively on services provided by volunteers are also exempt from the requirements of this subdivision.

(5) Criteria for approval of testing organizations. To be approved, a testing organization shall make application to the department on forms provided by the department and therein demonstrate responsibility for all aspects of the testing system from the development of the test, through test administration including test security system, documentation of successful test completion and record maintenance. Testing organizations must reapply for approval every five (5) years. Testing organizations shall demonstrate responsibility for all of the following areas:

(A) Test development. The test shall be based on an objective job analysis to determine content areas and shall include, but not be limited to, elements that test the qualified food operator's knowledge of food allergies. The test shall be developed based on generally accepted standards of test development. A passing score study to set the required passing scores shall be conducted. Content validation and examination field test studies shall be conducted.

(B) Test security. The testing organization shall have test security systems to ensure the integrity of the test during all phases of test development and handling. Test administrators must be trained in test security procedures. Where client based testing is conducted, proctoring agreements that establish examination handling and proctoring procedures are required between the testing organization and the proctor. Different forms of the test shall be maintained.

(C) Test administration. The testing organization shall serve as the primary contact for individuals interested in the test. Explanatory test materials shall be available to interested parties. Guidelines for test administration shall be developed. The test shall be readily available to meet the needs of Connecticut.

(D) Documentation and record keeping. All individuals taking the test shall be provided documentation indicating whether they passed or failed the test. Statistics on the test including an item analysis shall be maintained. A registry of all individuals who have taken the test shall be maintained. Statistical and registry information shall be made available to the department and local health departments upon request.

(6) Other documentation satisfactory to the department. In the absence of documentation that the qualified food operator has passed a test administered by a testing organization approved by the department, a signed statement by the owner/operator of the food service establishment attesting that the qualified food operator has demonstrated knowledge of food safety as specified in subparagraphs (A) and (B) of this subdivision shall constitute satisfactory evidence of compliance with subdivision (4) of this subsection. The local director of health may require documentation to support the signed statement. The following specific elements of knowledge and competence are required:

(A) Elements of knowledge

(i) Identify foodborne illness - define terms associated with foodborne illness; recognize the major microorganisms and toxins that can contaminate food and the problems that can be associated with the contamination; define and recognize potentially hazardous foods; define and recognize illness that can be associated with chemical and physical contamination; define and recognize the major contributing factors for foodborne illness; recognize how microorganisms cause foodborne disease.

(ii) Identify time/temperature relationship with foodborne illness - recognize the relationship between time/temperature and microorganisms (survival, growth, and toxin production); describe the use of thermometers in monitoring food temperatures.

(iii) Describe the relationship between personal hygiene and food safety - recognize the association between hand contact and foodborne illness; recognize the association between personal habits and behaviors and foodborne illness; recognize the association between health of a foodhandler and foodborne illness; recognize how policies, procedures and management contribute to improved food hygiene practices.

(iv) Describe methods for preventing food contamination from purchasing to serving- define terms associated with contamination; identify potential hazards prior to delivery and during delivery; identify potential hazards and methods to minimize or eliminate hazards after delivery.

(v) Identify and apply correct procedures for cleaning and sanitizing equipment and utensils- define terms associated with cleaning and sanitizing; apply principles of cleaning and sanitizing; identify materials, equipment, detergent, sanitizer; apply appropriate methods of cleaning and sanitizing; identify frequency of cleaning and sanitizing.

(vi) Recognize problems and potential solutions associated with facility, equipment and layout - identify facility, design, and construction suitable for food service establishments; identify equipment and utensil design and location.

(vii) Recognize problems and potential solutions associated with, temperature control, preventing cross contamination, housekeeping and maintenance- implement self inspection program; implement pest control program; implement cleaning schedules and procedures; implement equipment and facility maintenance program.

(viii) Identify and recognize the foods most commonly associated with food allergies.

(B) Demonstrable elements of competency

(i) Assess the potential for foodborne illness in a food service establishment - perform operational food safety assessment; recognize and develop standards, policies and procedures; select and train employees; implement self audit/inspection program; revise policy and procedure (feedback loop); implement crisis management program.

(ii) Assess and manage the process flow- identify approved source; implement and maintain a receiving program; implement and maintain storage procedures; implement and maintain preparation procedures; implement and maintain holding/ service/display procedures; implement and maintain cooling and post preparation storage procedures; implement and maintain re-service procedures; implement and maintain transportation procedures.

(7) Replacement of qualified food operator. Whenever the qualified food operator terminates employment, is terminated or is transferred, the person owning, operating or managing the food service establishment shall notify the local health department in writing. A replacement qualified food operator shall be employed within sixty (60) days from the date of termination or transfer of the qualified food operator. The local health department may grant an extension not to exceed an additional sixty (60) days to comply with this subdivision if deemed necessary.

(8) Responsibilities of qualified food operators

(A) The qualified food operator is responsible for operating the food service establishment in compliance with all the provisions of section 19-13-B42 of the Regulations of Connecticut State Agencies. The qualified food operator of each food service establishment is responsible for ensuring training of food preparation personnel. The following are exempt from the examination requirement for qualified food operators but shall receive training from any qualified food operator:

(i) volunteers who serve meals for a nonprofit organization; and

(ii) persons who serve meals at registered congregate meal sites funded under Title III of the Older Americans Act of 1965, as amended, which were prepared under the supervision of a qualified food operator. All such personnel shall receive training that shall include but not necessarily be limited to: instruction in proper food temperature control; food protection; personal health and cleanliness; and sanitation of the facility, equipment, supplies and utensils. The qualified food operator of each food service establishment shall maintain written documentation of a training program, and training records of individual employees, and shall make these records available to the local health department upon request. The owner,

operator, manager or qualified food operator of a food service establishment at a nonprofit organization or registered congregate meal site for senior citizens shall maintain such documentation and make such records available to the local health department upon request.

(B) The owner or manager of the food service establishment shall designate an alternate person who has complied with section 19-13-B42(s)(6) to be in charge at all times when the qualified food operator cannot be present. This alternate person in charge shall be responsible for: ensuring that all employees comply with the requirements of this section, and that foods are safely prepared; handling emergencies; admitting the inspector; and receiving and signing the inspection report.

(t) Inspection of food service establishments. All food service establishments shall be inspected by the director of health, registered sanitarian, or an authorized agent of the director of health, if such director, sanitarian or agent has been certified by the commissioner. Candidates for certification must be sponsored by a local director of health, and possess as minimum requirements a bachelors degree or three years experience in a food safety or regulatory food protection program acceptable to the department. Candidates shall not be involved in the ownership or management of a food establishment located within his jurisdiction. The certification program shall consist of a two stage process: 1) successful completion of classroom training and passing score on a final written exam; and 2) completion of a series of inspections with a certification officer from the department food protection program. Upon completion of the certification process, the department shall notify the director of health and the candidate in writing specifying the issuance of certification and expiration date. The commissioner shall have the authority to renew certification of each person conducting such inspections every three years. Recertification may be granted upon the successful completion of sixteen (16) hours of approved food protection training every three (3) years. The department shall be responsible for approving and assuring the provision of such training. Failure to comply with recertification requirements shall result in the certification to conduct inspections not being renewed. The department shall notify the director of health and the chief elected official of the affected food service jurisdiction when a certification is not renewed. All food service establishments shall be inspected in accordance with this subsection.

(1) Class I food service establishments shall be inspected at intervals not to exceed three hundred and sixty (360) days.

(2) Class II food service establishments shall be inspected at intervals not to exceed one hundred and eighty (180) days.

(3) Class III food service establishments shall be inspected at intervals not to exceed one hundred and twenty (120) days.

(4) Class IV food service establishments shall be inspected at intervals not to exceed ninety (90) days, except that an interval not to exceed one hundred and twenty 120 days may be allowed where one (1) of the inspections is a hazard analysis inspection.

(5) Access to establishments. The director of health, registered sanitarian or authorized agent after proper identification, shall be permitted to enter, at any reasonable time, any food service establishment for the purpose of making inspections to determine compliance with this section. He shall be permitted to examine the records of the establishment to obtain information pertaining to food and supplies purchased, received, or used, and persons employed, but not including financial records.

(6) Inspection records. Weighted values. Rating scores. Whenever the director of health, registered sanitarian or authorized agent makes an inspection of a food service establishment, he shall record his findings on an inspection report form included in this section and shall furnish a copy of such inspection report form to the owner or operator. Such form shall summarize the requirements of this section and shall set forth weighted point values for each such requirement. Forms, such as computer forms, which are substantially equivalent to the inspection form included in this section may be approved by the commissioner. Upon completion of an inspection, the director of health, registered sanitarian or authorized agent shall total the weighted point values for all requirements in compliance, such total becoming the rating score for the food service establishment. The total weighted point value shall be scored for each item in violation. The maximum rating shall be one hundred (100).

EHS-106-Rev. 06/01 **INSPECTION REPORT**
FOOD SERVICE ESTABLISHMENTS

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
410 Capitol Avenue, MS#51FDP, Hartford, CT 06134

ROUTINE INSPECTION REINSPECTION
 PREOPERATIONAL OTHER

NAME OF ESTABLISHMENT _____
STREET _____
ADDRESS _____
OWNER or OPERATOR _____

ESTABLISHMENT CLASS _____
TOWN _____
INSPECTION DATE and TIME _____

Based on an inspection this day, the items marked below identify the violations in operation or facilities which must be corrected by the date specified below.

SOURCES OF FOOD		
1	Approved source, wholesome, nonadulterated	4
2	Original container, properly labeled	1
FOOD PROTECTION		
3	Potentially hazardous food meets temperature requirements during storage, preparation, display, service, and transportation	4
4	Adequate facilities to maintain product temperature, thermometers provided.	2
5	Potentially hazardous food properly thawed	2
6	Unwrapped or potentially hazardous food not reserved	4
7	Food protected during storage, preparation, display, service & transportation	2
8	Food containers stored off floor	2
9	Handling of food minimized	2
10	Food dispensing utensils properly stored	1
11	Toxic items properly stored, labeled, used	4
PERSONNEL		
12	Personnel with infection restricted	4
CLEANLINESS OF PERSONNEL		
13	Handwashing facilities provided, personnel hands washed, clean	4
14	Clean outer clothes, effective hair restraints	1
15	Good hygienic practices, smoking restricted	2
EQUIPMENT & UTENSILS: DESIGN, CONSTRUCTION & INSTALLATION		
16	Food-contact surfaces designed, constructed, maintained, installed, located	2
17	Nonfood-contact surfaces designed, constructed, maintained, installed, located	1
18	Single service articles, storage, dispensing	2
19	No reuse of single service article	2
20	Dishwashing facilities approved design, adequately constructed, maintained, installed, located	2

EQUIPMENT & UTENSILS : CLEANLINESS		
21	Preflushed, scraped, soaked and racked	1
22	Wash water clean, proper temperature	1
23	Accurate thermometers provided, dish basket, if used	1
24	Sanitization rinse (hot water - chemical)	2
25	Clean wiping cloths	1
26	Food-contact surfaces of utensils & equipment clean	2
27	Nonfood-contact surfaces of utensils & equipment clean	1
28	Equipment/utensils, storage, handling	1

WATER SUPPLY		
29	Water source adequate, safe	4
30	Hot and cold water under pressure, provided as required	2

SEWAGE DISPOSAL		
31	Sewage disposal approved	4
32	Proper disposal of waste water	1

PLUMBING		
33	Location, installation, maintenance	1
34	No cross connection, back siphonage, backflow	4

TOILET FACILITIES		
35	Adequate, convenient, accessible, designed, installed	4
36	Toilet rooms enclosed with self-closing door	1
37	Proper fixtures provided, good repair, clean	1

HANDWASHING FACILITIES		
38	Suitable hand cleaner and sanitary towels or approved hand drying devices provided, tissue waste receptacles provided	1

GARBAGE/RUBBISH STORAGE & DISPOSAL		
39	Approved containers, adequate number, covered, rodent proof, clean	1
40	Storage area/rooms, enclosures - properly constructed, clean	1
41	Garbage disposed of in an approved manner, at approved frequency	1

VERMIN CONTROL		
42	Presence of insects/rodents	2
43	Outer openings protected against entrance of insects/rodents	1

FLOORS, WALLS & CEILINGS		
44	Floors: floor covering installed, constructed as required, good repair, clean	1
45	Floors, graded, drained as required	1
46	Floor, wall juncture covered	1
47	Mats removable, good repair, clean	1
48	Exterior walking, driving surfaces, good repair, clean	1
49	Walls, ceilings attached, equipment properly constructed, good repair, clean. Wall & ceiling surfaces as required.	1
50	Dustless cleaning methods used, cleaning equipment properly stored	1

LIGHTING & VENTILATION		
51	Adequate lighting provided as required	1
52	Room free of steam, smoke odors	1
53	Room & equipment hoods, ducts, vented as required	1

DRESSING ROOMS & LOCKERS		
54	Rooms adequate, clean, adequate lockers provided, facilities clean	1

HOUSEKEEPING		
55	Establishment and premises free of litter, no insect/rodent harborage, no unnecessary articles	1
56	Complete separation from living/sleeping quarters and laundry	1
57	Clean/soiled linens stored properly	1
58	No live birds, turtles, or other animals (except guide dogs)	1

SMOKING PROHIBITED		
59	Smoking prohibited, signs posted at each entrance	3

QUALIFIED FOOD OPERATOR		
60	Qualified Food Operator	3
61	Designated alternate	2
62	Written documentation of training program	2

DEMERIT SCORE			
4	3	2	1

RISK FACTOR VIOLATIONS IN RED

TOTAL	RATING	Date Corrections Due

Signature of Person in charge _____
SIGNED (Inspector) _____

DESCRIBE DEFICIENCIES ON CONTINUATION SHEETS

(u) **Enforcement** (1) Every food service establishment shall maintain a rating score of eighty (80) or higher and shall not have one (1) or more four (4) demerit point items in violation, regardless of the rating score. The four (4) demerit point items include: Food from approved source, wholesome, nonadulterated; potentially hazardous food meets temperature requirements during storage, preparation, display, service, and transportation; unwrapped or potentially hazardous food not re-served; toxic material properly stored, labeled, used; personnel with infections restricted; adequate handwashing facilities, convenient, accessible, designed, installed, personnel hands washed, clean; water source, adequate, safe; sewage disposal approved and no nuisance; no cross-connection, back-siphonage, backflow; and adequate toilet facilities, convenient, accessible, designed, installed. If the rating score is below eighty (80) or if there is one (1) or more four (4) demerit point items in violation at the time of inspection, the director of health, registered sanitarian or authorized agent shall order correction of the items in violation within two (2) weeks. After the two (2) weeks, the director of health, registered sanitarian or authorized agent shall make a reinspection and determine the new rating score.

(2) If the rating score at the time of the reinspection is below eighty (80) or if there is one (1) or more four (4) demerit point items in violation, the director of health, shall take immediate steps to have the food service establishment closed.

(3) However, if there are insanitary or other conditions in the operation of a food service establishment which, in the judgment of the director of health, constitutes an immediate and substantial hazard to the public health, he may immediately issue a written notice to the permit holder or operator citing such conditions, specifying the corrective action to be taken, and specifying the time period within which such action shall be taken, and, if deemed necessary order immediate correction. If correction is not made in the stated time, a written order shall be issued to close the food service establishment.

(4) If the rating score is eighty (80) or above or if there are any three (3) demerit point items in violation, the director of health, registered sanitarian or authorized agent shall order correction of any violations and specify time for correction. If a qualified food operator is not employed on-site, except as provided by the qualified food operator replacement provision in section 19-13-B42(s)(7), the food service establishment has thirty (30) days to comply. If correction has not been made after thirty (30) days, the director of health shall take immediate steps to close the food service establishment. The food service establishment shall also be reinspected as frequently as necessary in the determination of the local director of health to ensure compliance with this section.

(5) The owner or operator of any food service establishment may at any time request an inspection for the purpose of improving the rating score of the food service establishment. Within ten (10) days following receipt of a request including a signed statement that the violations have, in the applicant's opinion, been corrected, the director of health, registered sanitarian or authorized agent shall make an inspection and thereafter as many additional inspections as he may deem necessary to assure himself that the applicant is complying with the requirements of this section.

(6) The owner or operator of a food service establishment aggrieved by an order, may, within forty-eight (48) hours after such order, appeal to the director of health, who shall thereupon immediately examine into the merits of such case and may vacate, modify or affirm such order. The owner or operator of a food service establishment who is aggrieved by such action of the director of health may, no later than three (3) business days after receipt of the order, appeal to the commissioner

who shall thereupon immediately notify the authority from whose order the appeal was taken and examine into the merits of such case and may vacate, modify or affirm such action.

(Effective April 25, 1994; amended April 25, 1997, August 15, 2000, July 6, 2001, October 3, 2005, July 3, 2007)

Sec. 19-13-B43.

Repealed, March 6, 1974.

Sec. 19-13-B43a. Artificial ice plants

No city, town, borough, institution, person, firm or corporation shall operate within the state any plant for the manufacture, processing or packaging of artificial ice for sale for domestic use or for any commercial use where the manufactured ice may be directly consumed or come in contact with food or drink, except after compliance with the following regulations:

(a) Water used in the manufacture of ice, including that used to clean surfaces that come in contact with the ice, shall be of a safe, sanitary quality from a public supply or from a private source approved by the state department of health or local director of health. Cross connections between water supply systems of approved quality with unapproved water supplies are prohibited, and piping and water supplied fixtures shall comply with section 19-13-B45.

(b) The manufacture, processing or packaging of ice shall be conducted in an area which is adequately lighted and ventilated and of proper construction. This area shall be used for no other purpose than the manufacture, processing or packaging of ice or for food storage, preparation, or service, and shall be physically separated from any other activity. All surfaces which come in contact with the ice must be maintained in a clean and sanitary condition at all times. All precautions must be taken to prevent contamination of surfaces which come into contact with the ice.

(c) All sewage shall be disposed of in a public sewer or in accordance with sections 19-13-B20a through 19-13-B20r, inclusive, of the Public Health Code of the state of Connecticut. There shall be no direct waste connection between any ice making or storage unit and a sewer. Overhead sewers shall be located so as not to directly or indirectly contaminate the ice.

(d) Air used in the processing of ice shall be free of dust, dirt, insects or other contaminants.

(e) All utensils and equipment used to handle or otherwise manufacture ice, must be kept in a clean and sanitary condition. These items must be made of such materials as to be smooth, impervious, nontoxic, anti easily cleaned.

(f) At all times during manufacture, storage, transportation and sale, ice shall be protected from contamination by dust, dirt or any other source of contamination.

(g) Toilet facilities shall be adequate and conveniently located. Toilet rooms shall be adequately lighted anti ventilated to the outside air. Doors shall be of the self-closing type and all openings to the exterior shall be properly screened to prevent the entrance of flies. Lavatories shall be conveniently located near the toilet facility. They shall he provided with hot and cold running water, a dispensed type soap and hand drying facilities. All toilet rooms and hand washing facilities shall he maintained in a clean and sanitary manner.

(h) All necessary measures must be taken to prevent the entrance of flies and vermin into ice manufacturing plants and transportation vehicles

(i) No person while affected with any disease in a communicable form, or while a carrier of such disease, shall work in any area of an ice plant in any capacity in

which there is a likelihood of such person contaminating water, ice or ice-contact surfaces with pathogenic organisms, or transmitting disease to other individuals. All employees shall wear clean outer garments, maintain a high degree of personal cleanliness, and conform to good hygienic practices while on duty. They shall wash their hands thoroughly with soap and warm water in an approved handwashing facility before starting work and as often as may be necessary to remove soil contamination. No employee shall resume work after visiting the toilet room without having washed his hands. Employees shall not use tobacco in any form in any room used for the manufacture, processing, packaging, or storage of ice.

(j) This section shall be printed and kept posted in a conspicuous place in the plant.

(k) No city, town, borough, institution, person, firm, or corporation shall operate within the state any plant for the manufacture of artificial ice for sale where the manufactured ice may be directly consumed or come in contact with food or drink without local permits or licenses if such permits or licenses are required by local ordinances or otherwise without registration of the name and business address with the local director of health of the town, city or borough in which the business is conducted.

(Effective March 6, 1974)

Sec. 19-13-B44. Sanitation of trailer coaches

“Trailer coach” is defined as any of the various types of vehicles with motor power or designed to be towed with an automobile and adapted to human habitation either for the purpose of sleeping or eating or preparation of meals or both or designed or adapted to the use of an office or for the purpose of carrying on business.

(a) All toilets in trailer coaches shall be provided with fly-tight, leak-proof receptacles for containing excrement. Toilet vents shall be screened. Trailer coaches equipped with flush toilets shall be provided with suitable underneath holding tanks of adequate capacity for storage of trailer discharges between emptying.

(b) No liquid wastes, garbage, refuse matter or other waste material from any trailer coach shall be deposited on or within the limits of public highways.

(c) No trailer coach shall be parked on land within two hundred fifty feet of, and draining toward, any source of public drinking water supply.

(d) Cleansing of receptacles for wastes any excreta from trailer coaches by dipping or rinsing in the water of any lake, pond or stream is prohibited.

(e) No liquid wastes or excreta from any trailer coach shall be disposed of other than by emptying into a public or camp sewerage system, a septic or chemical tank system or a cesspool, provided, in isolated localities remote from camps or habitations, such wastes may be disposed of by burying in the soil with an earth covering of not less than six inches. No wastes shall be thus disposed of at a point less than two hundred and fifty feet of, and draining toward, any source of public drinking water supply, nor within fifty feet from the banks of any lake, pond, stream or watercourse not a source of public drinking supply, nor within fifty feet from any highway gutter.

Sec. 19-13-B45. Minimum requirements for drainage and toilet systems

(a) Plumbing and drainage systems shall be so constructed as to avoid contamination of safe drinking water supplies in houses or buildings. There shall be no cross connections between such safe water supplies and unsafe water supplies nor shall such safe supplies be piped to refrigeration, air conditioning or other mechanical equipment provided with direct connections to drains or constructed in such a manner as to permit contaminated water to be siphoned or drawn into the water supply pipes. Storage of drinking water in buildings shall be only in covered tanks

so constructed as to avoid any possible contamination of the water in the tanks. Sewer or waste lines located above storage tanks and direct overflows and drains to sewer systems are expressly prohibited.

(b) Buildings in which water closets and other plumbing fixtures exist shall be provided with a supply of water adequate in volume and pressure for flushing purposes.

(c) The pipe system shall be of sufficient size to supply water for adequate flushing of toilet fixtures without unduly reducing the pressure at other fixtures.

(d) Devices for heating water and storing it in "boilers" or hot water tanks shall be so designed and installed as to prevent all dangers from explosion.

(e) Each tenement, lodging or boarding house located on premises abutting any street or alley where running water is available and through which there is a sewer with which connection may be had shall be provided with water closets connected with such sewer. All other buildings used or intended to be used for human habitation or occupancy on premises abutting a street in which there is a public sewer shall be connected with such sewer whenever required by the local authorities having jurisdiction.

(f) Tenement houses erected prior to September 1, 1930, and provided with house drainage systems shall be furnished with at least one water closet for each two apartments of three rooms or less each, and one such closet for each apartment of four or more rooms. Tenement houses erected after August 31, 1930, and prior to July 1, 1941, shall have a water closet in each apartment of three or more rooms and at least one water closet for each two apartments of less than three rooms each. In each tenement house erected or subdivided after June 30, 1941, there shall be a water closet in each apartment of two or more rooms.

(g) Plumbing fixtures shall be made of smooth nonabsorbent material, shall be free from concealed fouling surfaces and shall be set free of enclosures.

(h) The entire house drainage system shall be so designed, constructed and maintained as to conduct the waste water or sewage quickly from the fixture to the place of disposal with velocities which will guard against fouling and the deposit of solids and will prevent clogging.

(i) The drainage pipes shall be so designed and constructed as to be proof for a reasonable life of the building against leakage of water or drain air due to defective materials, imperfect connections, corrosion, settlements or vibrations of the ground or building, temperature changes, freezing or other causes.

(j) The drainage system shall be provided with an adequate number of cleanouts so arranged that in case of stoppage the pipes may be readily accessible.

(k) Each fixture or combination fixture shall be provided with a separate, accessible, self-scouring, reliable water-seal trap placed as near to the fixture as possible.

(l) The house-drainage system shall be so designed that there will be an adequate circulation of air in all pipes and no danger of siphonage, aspiration or forcing of trap seals under conditions of ordinary use.

(m) The soil stack shall extend full size upward through the roof and have a free opening, the roof terminal being so located that there will be no danger of air passing from it to any window and no danger of clogging of the pipe by frost or by articles being thrown into it or of roof water draining into it.

(n) The plumbing system shall be subjected to a water or air-pressure test and to a final air-pressure, smoke or peppermint test in such a manner as to disclose all leaks and imperfections in the work.

(o) No substances which will clog the pipes, produce explosive mixtures or destroy the pipes or their joints shall be allowed to enter the house drainage system.

(p) Refrigerators, ice boxes or receptacles for storing food shall not be connected directly with the drainage system.

(q) No water closet shall be located in a room or compartment which is not properly lighted and ventilated to the outer air.

(r) If water closets or other plumbing fixtures exist in buildings where there is no public sewer accessible, suitable provision shall be made for disposing of the sewage without nuisance. The location and construction of private sewage disposal systems shall conform to the requirements of sections 19-13-B20a to 19-13-B20r, inclusive.

(s) Where a house-drainage system may be subjected to back flow of sewage, suitable provision shall be made to prevent its overflow in the building.

(t) No plumbing fixture nor waste outlet shall be installed which will provide a cross connection between a distributing system of water for drinking and domestic purposes and a drainage system, soil or waste pipe and permit or make possible the back flow or siphonage of sewage or waste into the water supply.

Note: Attention is directed to the danger from underrim water inlet fixtures and flushometer valves without adequate vacuum breakers.

(u) All drinking fountain installations or replacements after January 12, 1954, shall be constructed with a slanting jet issuing from a nozzle of non-oxidizing impervious material with a non-oxidizing guard to prevent the mouths and noses of persons using the fountain from coming in contact with the nozzle. The jet shall be located so as not to touch the guard and shall be discharged at such an angle that the water can neither fall back nor be forced back on to the point of discharge. The fountain jet and all openings in the water supply piping shall issue above the level of the fountain bowl. The drainage from the bowl shall be adequate and so constructed as to prevent fouling of the bowl. The drain from the fountain shall not have a direct physical connection to a waste pipe unless the drain is trapped. The waste opening and pipe from the fountain shall be of sufficient size to carry off the water promptly. The opening shall be provided with a strainer. All drinking fountains installed after January 12, 1954, shall be provided with their own receiving bowls and shall not be installed over sinks used for hand washing or other purposes.

(v) Plumbing systems shall be maintained in a sanitary condition.

(Effective December 21, 1978)

Sec. 19-13-B46. Notification by water officials in water supply emergencies

Whenever the security of a public water system is threatened or suspicious activities are observed on or near water company land or the treatment of a public water supply is interrupted or the source of supply is damaged so as to impair the quality or the sufficiency of the supply, the person, firm or corporation in charge of such public water system shall immediately notify the state department of public health and the local directors of health of all cities, towns and boroughs where water from such systems is supplied. Such notification shall be made immediately either by telephone or messenger or whatever other means of rapid communication is available.

(Amended March 30, 2004)

Sec. 19-13-B47. Disinfection of water mains, valves and structures

After November 15, 1948, in the case of construction of or repairs to any system of water supply furnished to the public, precautions shall be exercised in the handling, laying or installing of water pipe, valves or other structures through which water for potable purposes is delivered, so as to reduce to a minimum the entrance of foreign material and contamination, before such pipe, valves or other structures are

placed in service. After said date no new main, standpipe, reservoir, tank or other pipe or structure through which water is delivered to consumers for potable purposes shall be put into service on any system of water supply furnished to the public, nor shall the use of any such structure or main be resumed after it has been cleaned or repaired, until such structure or main has been effectively disinfected; provided this shall not apply to mains, tanks, reservoirs or structures, the waters from which are subsequently adequately treated or purified.

Sec. 19-13-B48. Itinerant food vending

No person, firm or corporation shall operate or maintain within the state an itinerant food vending establishment serving food or drink from any establishment or conveyance without fixed location and without connections to water supply and sewage disposal systems, except in compliance with the following requirements:

changedate2-08

(a) **Definitions**, as used in this section:

(1) "Authorized agent" means any individual certified by the commissioner to inspect itinerant food vending establishments and enforce the provisions of section 19-13-B48 of the Regulations of Connecticut State Agencies under the supervision and/or authority of the director of health.

(2) "Commissioner" means the commissioner of public health.

(3) "Department" means the State of Connecticut Department of Public Health.

(4) "Director of health" means the director of a local health department or district health department approved by the commissioner as specified in Connecticut General Statutes sections 19a-200 and 19a-242, respectively.

(5) "Full-time position" means thirty (30) hours per week or the number of hours per week that the itinerant food vending establishment is open for business, whichever is less.

(6) "Hazard analysis" means an evaluation of food handling operations to identify points of potential product contamination and assess the adequacy of hot processing and hot and cold storage methods for foods.

(7) "Itinerant food vending establishment" means a food vending business serving food or drink from any establishment or conveyance without fixed location and without connection to water supply and sewage disposal systems.

(8) "Potentially hazardous food" means any food or food ingredient, natural or synthetic, that is in a form capable of supporting:

(A) the rapid and progressive growth of infectious or toxigenic microorganisms, or

(B) the slower growth of *Clostridium botulinum*.

(9) "Qualified food operator" means a food operator employed in a full-time position who has demonstrated a knowledge of safe food handling techniques.

(10) "Supervisory position" means the position of a person who directs and inspects the performance of itinerant food vending workers.

(b) All food and drink while being stored, prepared, displayed, served or sold or during transportation shall be protected from dust, flies, vermin, depredation and pollution by rodents, unnecessary handling, droplet infection, overhead leakage or other contamination, provided that the making of sandwiches or heating food to be placed in sandwiches or in single-service containers may be permitted by the local director of health with such sanitary provisions as he may require. All food and drink shall be clean, wholesome, free from spoilage and so prepared as to be safe for human consumption. All oysters, clams and mussels shall be from approved

sources and, if shucked, shall be kept until used in the containers in which they were received.

(c) All single-service eating and drinking articles shall be made from nontoxic materials, and shall have been manufactured, packaged, transported, stored, handled and dispensed in a sanitary manner, and shall be used only once. Drinking straws or any other device, hollow in nature, whereby through its use a beverage can be drawn into the mouth shall be separately wrapped, either individually or in pairs, with a sanitary protective covering for individual use.

(d) All perishable food and drink shall be stored at such temperatures as will protect against spoilage. All potentially hazardous food and drink which consist in whole or in part of milk products, eggs, meat, poultry, fish, shellfish, or other ingredients capable of supporting rapid and progressive growth of infectious or toxigenic microorganisms, shall be maintained at safe temperatures at forty-five (45) degrees F. or below, or one hundred and forty (140) degrees F. or above, except during necessary periods of preparation and service. The pouring lips of bottles or containers of milk or other beverages shall not be submerged for cooling.

(e) This section shall not prevent an operator from preparing and dispensing drinking beverages from flytight and dustproof containers from which the liquid may be removed only by faucets or other sanitary methods and served in single-service containers.

(f) No employee shall resume work after using a toilet without first washing his hands. All employees shall wear clean outer garments and maintain a high degree of personal cleanliness, and conform to hygienic practices while on duty. They shall wash their hands thoroughly in an approved handwashing facility before starting work. Employees shall not use tobacco in any form while engaged in food preparation or service.

(g) Adequate provision shall be made to collect, store and dispose of, without nuisance, all used containers, wrappings and other disposables connected with the operation, and all other wastes or waste materials.

(h) All vehicles shall have the name and address of the person, firm or corporation responsible for the operation legibly printed on both sides of the vehicle. Such vehicles shall be kept in a clean and sanitary condition at all times.

(i) No person while affected with any disease in a communicable form or while a carrier of such disease, or while afflicted with boils, infected wounds, sores or an acute respiratory infection, shall work in any itinerant food vending establishment nor shall any such person or persons suspected of being affected with any disease in a communicable form or of being a carrier of such disease to be employed. If the management of an itinerant food vending establishment has reason to suspect that any employee has contracted any disease in a communicable form or has become a carrier of such a disease, he shall notify the local director of health immediately. When the local director of health has reasonable cause to suspect possibility of disease transmission from any food service employee, he shall secure a morbidity history of the suspected employee, or make such other investigation as may be indicated, and take appropriate action. The director of health may require any or all of the following measures: (1) The immediate exclusion of the employee from all food service; (2) the immediate closure of the food service concerned until, in the opinion of the director of health, no further danger of disease outbreak exists; and (3) adequate medical and laboratory examinations of the employee, or other employees, and of his and their body discharges.

(j) (1) No person shall conduct an itinerant food vending establishment in any town, city or borough without a local permit or license, or otherwise without

registration of the name and business address with the local director of health of the town, city or borough in which the business is conducted; if such permit or license is required by local ordinance.

(2) Itinerant food vending establishment classification. The director of health, registered sanitarian, or authorized agent shall classify each itinerant food vending establishment by using the criteria outlined in this subdivision. Establishments shall be classified at the time of licensure, where licensure is required by local ordinance, or otherwise at the time of registration with the local director of health. The classification shall be reviewed by the director of health, registered sanitarian, or authorized agent during each inspection and in no case less than annually. The itinerant food vending establishment shall be placed into the highest classification that describes any of the food operations conducted. When it comes to the attention of the director of health, registered sanitarian, or authorized agent that the operation has changed to a different class the director of health, registered sanitarian, or authorized agent shall reclassify the itinerant food vending establishment. No itinerant food vending establishment shall change food operations to a different classification without prior approval by the director of health, registered sanitarian, or authorized agent. The classes of itinerant food vending establishments are as follows:

(A) Class I is an itinerant food vending establishment with commercially prepackaged foods and/or hot or cold beverages only. No preparation, cooking or hot holding of potentially hazardous foods is included, except that commercially packaged precooked foods may be heated and served in the original package within four (4) hours.

(B) Class II is an itinerant food vending establishment using cold or ready-to-eat commercially processed food requiring no further heat treatment and/or hot or cold beverages. No cooking, heating or hot holding of potentially hazardous foods is included, except that commercially packaged precooked foods may be heated and served in the original package within four (4) hours and commercially precooked hot dogs, kielbasa, and soup may be heated if transferred directly out of the original package and served within four (4) hours.

(c) Class III is an itinerant food vending establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and consumed by the public within four (4) hours of preparation.

(d) Class IV is an itinerant food vending establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and held for more than four (4) hours prior to consumption by the public.

(3) Qualified food operator required. Each person owning, operating or managing any itinerant food vending establishment designated as class III or class IV shall be a qualified food operator or shall employ on-site at least one (1) qualified food operator who is in a supervisory position at said establishment. Each itinerant food vending establishment shall be in compliance with this subdivision by August 1, 1997. Satisfactory evidence of compliance with this subdivision shall be documentation that the qualified food operator has passed a test administered by a testing organization approved by the department, or other documentation satisfactory to the department attesting to the individual's knowledge of safe food handling techniques as specified in subdivision (5) of this subsection. Said documentation shall be maintained on file at the itinerant food vending establishment and provided to the local director of health, registered sanitarian, or authorized agent on request. Exempt from the requirements of this subdivision are special events sponsored by non-profit civic organizations such as, but not limited to, school sporting events, little league, and fairs.

(4) Criteria for approval of testing organizations. To be approved, a testing organization shall make application to the department and therein demonstrate responsibility for all aspects of the testing system from the development of the test, through test administration including test security system, documentation of successful test completion and record maintenance. Testing organizations must reapply for approval every five (5) years. Testing organizations shall demonstrate responsibility for all of the following areas.

(A) Test development. The test shall be based on an objective job analysis to determine content areas and shall include, but not be limited to, elements that test the qualified food operator's knowledge of food allergies. The test shall be developed based on generally accepted standards of test development. A passing score study to set the required passing scores shall be conducted. Content validation and examination field test studies shall be conducted.

(B) Test security. The testing organization shall have test security systems to ensure the integrity of the test during all phases of test development and handling. Test administrators must be trained in test security procedures. Where client based testing is conducted, proctoring agreements that establish examination handling and proctoring procedures are required between the testing organization and the proctor. Different forms of the test shall be maintained.

(C) Test administration. The testing organization shall serve as the primary contact for individuals interested in the test. Explanatory test materials shall be available to interested parties. Guidelines for test administration shall be developed. The test shall be readily available to meet the needs of Connecticut.

(D) Documentation and record keeping. All individuals taking the test shall be provided documentation indicating whether they passed or failed the test. Statistics on the test including an item analysis shall be maintained. A registry of all individuals who have taken the test shall be maintained. Statistical and registry information shall be made available to the department and local health departments upon request.

(5) Other documentation satisfactory to the department. In the absence of documentation that the qualified food operator has passed a test administered by a testing organization approved by the department, a signed statement by the owner/operator of the itinerant food vending establishment attesting that the qualified food operator has demonstrated knowledge of food safety as specified in subparagraphs (A) and (B) of this subdivision shall constitute satisfactory evidence of compliance with subdivision (3) of this subsection. The local director of health may require documentation to support the signed statement. The following specific elements of knowledge and competence are required.

(A) Elements of knowledge

(i) Identify foodborne illness - define terms associated with foodborne illness; recognize the major microorganisms and toxins that can contaminate food and the problems that can be associated with the contamination; define and recognize potentially hazardous foods; define and recognize illness that can be associated with chemical and physical contamination; define and recognize the major contributing factors for foodborne illness; recognize how microorganisms cause foodborne disease.

(ii) Identify time/temperature relationship with foodborne illness - recognize the relationship between time/temperature and microorganisms (survival, growth, and toxin production); describe the use of thermometers in monitoring food temperatures.

(iii) Describe the relationship between personal hygiene and food safety - recognize the association between hand contact and foodborne illness; recognize the association between personal habits and behaviors and foodborne illness; recognize

the association between health of a foodhandler and foodborne illness; recognize how policies, procedures and management contribute to improved food hygiene practices.

(iv) Describe methods for preventing food contamination from purchasing to serving - define terms associated with contamination; identify potential hazards prior to delivery and during delivery; identify potential hazards and methods to minimize or eliminate hazards after delivery.

(v) Identify and apply correct procedures for cleaning and sanitizing equipment and utensils - define terms associated with cleaning and sanitizing; apply principles of cleaning and sanitizing; identify materials, equipment, detergent, sanitizer; apply appropriate methods of cleaning and sanitizing, identify frequency of cleaning and sanitizing.

(vi) Recognize problems and potential solutions associated with facility, equipment, and layout - identify facility, design, and construction suitable for food establishments; identify equipment and utensil design and location.

(vii) Recognize problems and potential solutions associated with temperature control, preventing cross contamination, housekeeping and maintenance - implement self inspection program; implement pest control program; implement cleaning schedules and procedures; implement equipment and facility maintenance program.

(viii) Identify and recognize the foods most commonly associated with food allergies.

(B) Demonstrable elements of competency

(i) assess the potential for foodborne illness in a food establishment - perform operational food safety assessment; recognize and develop standards, policies and procedures; select and train employees; implement self audit/inspection program; revise policy and procedure (feedback loop); implement crisis management program.

(ii) Assess and manage the process flow - identify approved source; implement and maintain a receiving program; implement and maintain storage procedures; implement and maintain preparation procedures; implement and maintain holding/service/display procedures; implement and maintain cooling and post preparation storage procedures; implement and maintain re-service procedures; implement and maintain transportation procedures.

(6) Replacement of qualified food operator. Whenever the qualified food operator terminates employment, is terminated or is transferred, the person owning, operating or managing the itinerant food vending establishment shall notify the local health department in writing. A replacement qualified food operator shall be employed within sixty (60) days from the date of termination or transfer of the qualified food operator. The local health department may grant an extension not to exceed an additional sixty (60) days to comply with this subdivision if deemed necessary.

(7) Responsibilities of qualified food operators

(A) The qualified food operator is responsible for operating the itinerant food vending establishment in compliance with all the provisions of section 19-13-B48 of the Regulations of Connecticut State Agencies. The qualified food operator of each itinerant food vending establishment shall be responsible for training of food preparation personnel. All such personnel shall receive training which shall include but not necessarily be limited to: instruction in proper food temperature control; food protection; personal health and cleanliness; and sanitation of the facility, equipment, supplies and utensils. The qualified food operator shall maintain written documentation of a training program, and training records of individual employees, and shall make these records available to the local health department upon request.

(B) The owner or manager of the itinerant food vending establishment shall designate an alternate person to be in charge at all times when the qualified food

operator cannot be present. This alternate person in charge shall be responsible for: ensuring that all employees comply with the requirements of this section and that foods are safely prepared; handling emergencies; admitting the inspector; and receiving and signing the inspection report.

(k) Nothing in this section shall prevent the manufacture and sale of frozen desserts in mobile units operating under licenses issued by the commissioner of consumer protection.

(l) **Inspection of itinerant food vending establishments.** All itinerant food vending establishments shall be inspected by the director of health, registered sanitarian, or authorized agent, if such director, sanitarian or agent has been certified by the commissioner. Certification of each person conducting such inspections may be renewed every three (3) years by the commissioner. All itinerant food vending establishments shall be inspected in accordance with this subsection.

(1) Class I food vending establishments shall be inspected at intervals not to exceed three hundred and sixty (360) days.

(2) Class II food vending establishments shall be inspected at intervals not to exceed one hundred and eighty (180) days.

(3) Class III food vending establishments shall be inspected at intervals not to exceed one hundred and twenty (120) days.

(4) Class IV food vending establishments shall be inspected at intervals not to exceed ninety (90) days, except that an interval not to exceed one hundred and twenty (120) days may be allowed where one (1) of the inspections is a hazard analysis inspection.

(5) Access to establishments. The director of health, registered sanitarian or authorized agent after proper identification, shall be permitted to enter, at any reasonable time, any itinerant food vending establishment for the purpose of making inspections to determine compliance with this section. He shall be permitted to examine the records of the establishment to obtain information pertaining to food and supplies purchased, received, or used, and persons employed, but not including financial records.

(6) Inspection records. Weighted value. Rating scores. Whenever the director of health, registered sanitarian or authorized agent makes an inspection of an itinerant food vending establishment, he shall record his findings on an inspection report form included in this section and shall furnish a copy of such inspection report form to the owner or operator. Forms, such as computer forms, which are substantially equivalent to the inspection form included in this section may be approved by the commissioner. Such form shall summarize the requirements of this section and shall set forth weighted point values for each such requirement. Upon completion of an inspection, the director of health, registered sanitarian or authorized agent shall total the weighted point values for all requirements in compliance, such total becoming the rating score for the itinerant food vending establishment. The total weighted point value shall be scored for each item in violation.

(m) **Enforcement**

(1) Every itinerant food vending establishment shall maintain a rating score of eighty (80) or higher and shall not have one (1) or more four (4) demerit point items in violation, regardless of the rating score. The four (4) demerit point items include: food from approved source, wholesome, nonadulterated; potentially hazardous food meets temperature requirements during storage, preparation, display, service, and transportation; unwrapped and potentially hazardous food not re-served; toxic material properly stored, labeled, used; personnel with infections, restricted; personnel hands washed, clean; water source, adequate, safe; sewage disposal

approved and no nuisance; no cross-connection, back-siphonage, backflow; and adequate toilet and handwashing facilities, convenient, accessible, designed, installed. If the rating score is below eighty (80) or if there is one (1) or more four (4) demerit point items in violation at the time of inspection, the director of health, registered sanitarian or authorized agent shall order correction of the items in violation within two (2) weeks. After the two (2) weeks, the director of health, registered sanitarian or authorized agent shall make a reinspection and determine the new rating score.

(2) If the rating score at the time of the reinspection is below eighty (80) or if there is one (1) or more four (4) demerit point items in violation, the director of health shall take immediate steps to have the itinerant food vending establishment closed.

(3) However, if there are insanitary or other conditions in the operation of an itinerant food vending establishment which in the judgement of the director of

INS-106-Rev. 06/01 **INSPECTION REPORT**
FOOD SERVICE ESTABLISHMENTS

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
410 Capitol Avenue, MS#51FDP, Hartford, CT 06134

ROUTINE INSPECTION REINSPECTION
 PREOPERATIONAL OTHER

NAME OF ESTABLISHMENT _____ STREET ADDRESS _____ OWNER or OPERATOR _____	ESTABLISHMENT CLASS _____ TOWN _____ INSPECTION DATE and TIME _____
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Based on an inspection this day, the items marked below identify the violations in operation or facilities which must be corrected by the date specified below.

SOURCES OF FOOD 1 Approved source, wholesome, nonfluoridated 4 2 Original container, properly labeled 1 FOOD PROTECTION 3 Potentially hazardous food meets temperature requirements during storage, preparation, display, service, and transportation 4 4 Adequate facilities to maintain product temperature, thermometers provided 2 5 Potentially hazardous food properly thawed 2 6 Unwrapped or potentially hazardous food not reserved 4 7 Food protected during storage, preparation, display, service & transportation 2 8 Food containers stored off floor 9 Handling of food minimized 2 10 Food dispensing utensils properly stored 1 11 Toxic items properly stored, labeled, used 4 PERSONNEL 12 Personnel with infection restricted 4 CLEANLINESS OF PERSONNEL 13 Handwashing facilities provided, personnel hands washed, clean 4 14 Clean outer clothes, effective hair restraints 1 15 Good hygienic practices, smoking restricted 2 EQUIPMENT & UTENSILS: DESIGN, CONSTRUCTION & INSTALLATION 16 Food-contact surfaces designed, constructed, maintained, installed, located 2 17 Nonfood-contact surfaces designed, constructed, maintained, installed, located 1 18 Single service articles, storage, dispensing 2 19 No reuse of single service article 20 Dishwashing facilities approved design, adequately constructed, maintained, installed, located 2	EQUIPMENT & UTENSILS : CLEANLINESS 21 Preflushed, scraped, soaked and racked 1 22 Wash water clean, proper temperature 1 23 Accurate thermometers provided, dish basket, if used 24 Sanitization rinse (hot water - chemical) 2 25 Clean wiping cloths 1 26 Food-contact surfaces of utensils & equipment clean 2 27 Nonfood-contact surfaces of utensils & equipment clean 1 28 Equipment/utensils, storage, handling 1 WATER SUPPLY 29 Water source adequate, safe 4 30 Hot and cold water under pressure, provided as required 2 SEWAGE DISPOSAL 31 Sewage disposal approved 4 32 Proper disposal of waste water 1 PLUMBING 33 Location, installation, maintenance 1 34 No cross connection, back siphonage, backflow 4 TOILET FACILITIES 35 Adequate, convenient, accessible, designed, installed 4 36 Toilet rooms enclosed with self-closing door 1 37 Proper fixtures provided, good repair, clean HANDWASHING FACILITIES 38 Suitable hand cleaner and sanitary towels or approved hand drying devices provided, tissue waste receptacles provided 1 GARBAGE/RUBBISH STORAGE & DISPOSAL 39 Approved containers, adequate number, covered, rodent proof, clean 1 40 Storage area/rooms, enclosures - properly constructed, clean 1 41 Garbage disposed of in an approved manner, at approved frequency 1	VERMIN CONTROL 42 Presence of insect/rodents 2 43 Outer openings protected against entrance of insect/rodents 1 FLOORS, WALLS & CEILINGS 44 Floors: floor covering installed, constructed as required, good repair, clean 45 Floors, graded, drained as required 1 46 Floor, wall juncture covered 47 Mats removable, good repair, clean 48 Exterior walking, driving surfaces, good repair, clean 1 49 Walls, ceilings attached, equipment properly constructed, good repair, clean. Wall & ceiling surfaces as required. 1 50 Dustless cleaning methods used, cleaning equipment properly stored 1 LIGHTING & VENTILATION 51 Adequate lighting provided as required 1 52 Room free of steam, smoke odors 1 53 Room & equipment hoods, ducts, vented as required DRESSING ROOMS & LOCKERS 54 Rooms adequate, clean, adequate lockers provided, facilities clean 1 HOUSEKEEPING 55 Establishment and premises free of litter, no insect/rodent harborage, no unnecessary articles 1 56 Complete separation from living/sleeping quarters and laundry 1 57 Clean/soiled linens stored properly 1 58 No live birds, turtles, or other animals (except guide dogs) 1 SMOKING PROHIBITED 59 Smoking prohibited, signs posted at each entrance 3 QUALIFIED FOOD OPERATOR 60 Qualified Food Operator 3 61 Designated alternate 2 62 Written documentation of training program 2
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DEMERIT SCORE			
4	3	2	1
/	/	/	/
TOTAL	RATING	Date Corrections Due	

RISK FACTOR VIOLATIONS IN RED

Signature of Person in charge	
SIGNED (Inspector)	

DESCRIBE DEFICIENCIES ON CONTINUATION SHEETS

health constitutes an immediate and substantial hazard to the public health, he may immediately issue a written notice to the permit holder or operator citing such condition, specifying the corrective action to be taken, and specifying the time period within which such action shall be taken, and, if deemed necessary order immediate correction. If correction is not made in the stated time, a written order shall be issued to close the itinerant food vending establishment.

(4) If the rating score is eighty (80) or above, the director of health, registered sanitarian or authorized agent shall order correction of any violations and specify time for correction. The itinerant food vending establishment shall also be reinspected as frequently as necessary in the determination of the local director of health to ensure compliance with this section.

(5) The owner or operator of any itinerant food vending establishment may at any time request an inspection for the purpose of improving the rating score of the establishment. Within ten (10) days following receipt of a request including a signed statement that the violations have in the applicant's opinion, been corrected, the director of health, registered sanitarian or authorized agent shall make an inspection and thereafter as many additional inspections as he may deem necessary to assure himself that the applicant is complying with requirements of this section.

(6) The owner or operator of an itinerant food vending establishment aggrieved by an order may, within forty-eight (48) hours after such order, appeal to the director of health, who shall thereupon immediately examine into the merits of such case and may vacate, modify or affirm such order. The owner or operator of an itinerant food vending establishment who is aggrieved by such action of the director of health may, no later than three (3) business days after receipt of the order, appeal to the commissioner who shall thereupon immediately notify the authority from whose order the appeal was taken and examine into the merits of such case and may vacate, modify or affirm such action.

(Effective April 25, 1994; amended October 3, 2005, July 3, 2007)

Sec. 19-13-B49. Catering food service

No person, firm or corporation shall operate or maintain within the state a catering food service establishment, which involves the sale or distribution of food and drink prepared in bulk at one (1) geographic location for service in individual portions at another or which involves preparation and service of food on public or private premises not under the ownership or control of the operator of such service except in compliance with the following requirements:

(a) **Definitions**, as used in this section:

(1) "Authorized agent" means any individual certified by the commissioner to inspect catering food service establishments and enforce the provisions of section 19-13-B49 of the Regulations of Connecticut State Agencies under the supervision and/or authority of the director of health.

(2) "Catering food service establishment" means a business involved in the sale or distribution of food and drink prepared in bulk in one (1) geographic location for service in individual portions at another or which involves preparation and service of food on public or private premises not under the ownership or control of the operator of such service.

(3) "Comminuted" means reduced in size by methods including chopping, flaking, grinding, or mincing and includes fish or meat products that are reduced in size and restructured or reformulated such as gefilte fish, gyros, ground beef, and sausage.

(4) "Commissioner" means the commissioner of public health.

(5) "Department" means the state of Connecticut Department of Public Health.

(6) "Director of health" means the director of a local health department or district health department approved by the commissioner as specified in Connecticut General Statutes sections 19a-200 and 19a-242, respectively.

(7) "Food employee" means an individual working with unpackaged food, food equipment or utensils, or food-contact surfaces.

(8) "Full-time position" means thirty (30) hours per week or the number of hours per week the catering food service establishment is open for business, whichever is less.

(9) “Hazard analysis” means an evaluation of food handling operations to identify points of potential product contamination and assess the adequacy of hot processing and hot and cold storage methods for foods.

(10) “Potentially hazardous food” means any food or food ingredient, natural or synthetic, that is in a form capable of supporting:

(A) the rapid and progressive growth of infectious or toxigenic microorganisms, or

(B) the slower growth of *Clostridium botulinum*.

(11) “Qualified food operator” means a food operator employed in a full-time position who has demonstrated a knowledge of safe food handling techniques.

(12) “Ready-to-eat food” means food that is in a form that is edible without washing, cooking, or additional preparation by the catering food service establishment or the consumer and that is reasonably expected to be consumed in that form.

(13) “Supervisory position” means the position of a person who directs and inspects the performance of catering food service workers.

(b) The floor surfaces in kitchens, in all other rooms and areas in which food or drink is stored or prepared, in which multi-use utensils are washed, and walk-in refrigerators, dressing or locker rooms and toilet rooms, shall be of smooth nonabsorbent materials, and so constructed as to be easily cleaned. The floors of non-refrigerated dry food storage areas need not be nonabsorbent. All floors shall be kept clean and in good repair. Floor drains shall be provided in all rooms where floors are subjected to flooding-type cleaning or where normal operations release or discharge water or other liquid waste on the floor. No sawdust or similar material shall be spread on the floors. All exterior areas where food is served shall be kept clean and properly drained, and the surfaces in such areas shall be finished so as to facilitate maintenance and minimize dust.

(c) The walls and ceilings of all rooms shall be kept clean and in good repair. All walls of rooms or areas in which food or drink is prepared, or multi-use utensils or hands are washed, shall be easily cleanable, smooth, light-colored, and shall have washable surfaces up to the level reached by splash or spray.

(d) (1) Effective measures shall be taken to protect against the entrance into the establishment or breeding on the premises of insects, rodents and other animals by:

(A) filling or closing holes and other gaps along floors, walls, and ceilings,

(B) closed, tight-fitting windows, and

(C) solid self-closing, tight-fitting doors; or

(2) if windows or doors are kept open for ventilation or other purposes, the openings shall be protected against the entrance of insects, rodents or other animals by:

(A) 16 mesh to 25.4 mm (16 mesh to 1 inch) screens,

(B) properly designed and installed air curtains, or

(C) other methods which are submitted for review and approval by the local director of health. The submission of an alternative method to those listed in (A) and (B) of this subdivision for review by the director of health shall be accompanied by documentation which the director of health finds demonstrates that the method will be as effective in preventing the entrance of insects and rodents or other animals as those listed in (A) and (B) of this subdivision.

(3) Subdivision (2) of this subsection does not apply if flying insects and other pests are absent due to the location of the establishment, the weather, or other limiting condition.

(e) All areas in which food or drink is prepared or stored or multi-use utensils are washed, handwashing areas, dressing or locker rooms, toilet rooms and garbage

and rubbish storage areas shall be well lighted. During all cleanup activities, adequate light shall be provided in the area being cleaned, and upon or around equipment being cleaned. All rooms in which food or drink is prepared or served or multi-use utensils are washed, dressing or locker rooms, toilet rooms, and garbage and rubbish storage areas shall be well ventilated. Ventilation hoods and devices shall be designed to prevent grease or condensate from dripping into food or onto food preparation surfaces. Filters, where used, shall be readily removable for cleaning or replacement. Ventilation systems shall comply with applicable state and local fire prevention requirements and shall, when vented to the outside air, discharge in such a manner as not to create a nuisance.

(f) Each catering food service establishment preparing food or drink shall be provided with adequate, conveniently located toilet facilities for its employees. Toilet fixtures shall be sanitary and readily cleanable. Toilet facilities, including rooms and fixtures, shall be kept in a clean condition and in good repair. The doors of all toilet rooms shall be self-closing. Toilet room walls shall be tight and extend from floor to ceiling. Toilet tissue shall be provided. Easily cleanable receptacles shall be provided for waste materials, and such receptacles in toilet rooms for women shall be covered. Toilet and handwashing facilities accessible to the public shall be provided in conformance with sections 19-13-B105 through 19-13-B113 of the Regulations of Connecticut State Agencies. Where the use of non-water-carried sewage disposal facilities has been approved by the local director of health, such facilities shall be separate from the catering food service establishment. All sewage shall be disposed of in a public sewerage system or, in the absence thereof, in a manner approved by the local director of health. Plumbing shall be so sized, installed and maintained as to prevent contamination of the water supply; as to properly convey sewage and liquid wastes from the catering food service establishment to the sewerage or sewage disposal system; and as not to constitute a source of contamination of food equipment or multi-use utensils, or create an insanitary condition or nuisance.

(g) The water supply shall be adequate, of a safe, sanitary quality, be in conformance with section 19-13-B102 of the Regulations of Connecticut State Agencies and be from an approved source which is in conformance with sections 19-13-B51A through 19-13-B51M of the Regulations of Connecticut State Agencies. Hot and cold running water under pressure shall be provided in all areas where food or drink is prepared or equipment, multi-use utensils or containers are washed. Hot water supplied in all areas where food or drink is prepared and where multi-use utensils and equipment are washed, and for other general purposes shall be maintained at a temperature of at least one hundred and ten (110) degrees f. through a mixing valve or combination faucet. Hot water supplied at hand washing sinks available to the public shall be in conformance with public health code section 19-13-B111 of the Regulations of Connecticut State Agencies. Ice used for any purpose shall be made from water which comes from an approved source; and shall be used only if it has been manufactured, stored, transported, and handled in a sanitary manner.

(h) Each catering food service establishment serving food or drink shall be provided with handwashing facilities located to allow for convenient use by employees in food preparation, food dispensing, and warewashing areas, and within or immediately adjacent to all toilet rooms. The handwashing facilities shall be equipped with hot and cold or tempered running water, hand cleansing soap or detergent dispensed in a sanitary manner, and individual disposable towels or other hand drying device acceptable to the director of health. The use of a common towel

is prohibited. A handwashing facility shall not be used for purposes other than handwashing. The handwashing facilities shall be maintained so that they are accessible at all times for employee use. Such facilities shall be kept clean and in good repair. No employee shall resume work after using the toilet room without first washing his hands.

All equipment and multi-use utensils, and all show and display cases or window counters, shelves, tables, chairs and refrigerating equipment shall be so designed of such material and workmanship as to be smooth, easily cleanable and durable and shall be in good repair; and the food contact surfaces of such equipment and utensils shall, in addition, be easily accessible for cleaning, nontoxic, corrosion-resistant and relatively nonabsorbent. Sinks, dishboards and drainboards shall be constructed of galvanized metal or better, suitably reinforced, of such thickness and design as to resist denting and buckling, and sloped so as to be self-draining. Exceptions approved by the local director of health may be made to the above material requirements for equipment such as cutting boards, blocks and bakers' tables and containers for dry products.

(j)(1) All equipment shall be so installed and maintained as to facilitate the cleaning thereof, and of all adjacent areas.

(2) Equipment in use on October 15, 1963, which does not fully meet the above requirements may be continued in use if it is in good repair and capable of being maintained in a sanitary condition, and if the food contact surfaces are nontoxic. Utensils containing or plated with cadmium or lead shall not be used, provided solder containing lead may be used for jointing. All cloths and towels used by waiters, chefs and other employees shall be clean.

(3) All multi-use eating and drinking utensils shall be thoroughly washed and rinsed and sanitized after each use, in accordance with the following approved sanitizing process.

(A) When manual dishwashing is used, a three-compartment sink shall be provided and used wherever washing, rinsing, and sanitization of equipment or utensils are conducted; provided, that in catering food service establishments where the only utensils to be washed are limited to spatulas, tongs, and similar devices, and when the only equipment to be cleaned is stationary and does not require disassembly for proper cleaning, a two-compartment sink may be approved by the director of health for this purpose. At least a two-compartment sink shall be provided and used for washing kitchenware and equipment which does not require sanitization. A warewashing sink shall not be used for handwashing or dumping mop water. Sinks used to wash or thaw food shall be sanitized before and after using the sink to wash produce or thaw food. Utensils after thorough washing and rinsing, clean to sight and touch, shall be sanitized by:

(i) Immersion for at least one (1) minute in clean, hot water at a temperature of at least one hundred and seventy (170) degrees F. An approved thermometer shall be available convenient to the vat. The pouring of scalding water over the washed utensils shall not be accepted as satisfactory compliance; or

(ii) immersion for at least one (1) minute in a sanitizing solution containing: at least fifty (50) mg/l of available chlorine at a temperature of not less than seventy-five (75) degrees F. The bath should be made up to a strength of one hundred (100) mg/l or more of available chlorine and shall not be used after its strength has been reduced to fifty (50) mg/l; or at least twelve and one-half (12.5) mg/l of available iodine in a solution having a pH value not higher than five (5.0) and a temperature of not less than seventy-five (75) degrees F.; or any other chemical sanitizing agent

which has been demonstrated to the satisfaction of the director of health to be effective and non-toxic under conditions of use hereunder and for which a suitable field test is available. Such sanitizing agents shall provide a bactericidal effect equivalent to a solution containing at least fifty (50) mg/l of available chlorine at a temperature not less than seventy-five (75) degrees F.

(B) When dishwashing is done by machine:

(i) Wash water shall be kept reasonably clean, and rinse-water tanks shall be so protected by distance, baffles or other effective means as to minimize the entry of wash water into the rinse water. All water inlets shall be protected against backflow.

(ii) The flow pressure shall be not less than fifteen (15) or more than twenty-five (25) pounds per square inch on the water line at the machine, and not less than ten (10) pounds per square inch at the rinse nozzles. A suitable gauge cock shall be provided immediately upstream from the final rinse sprays to permit checking the flow pressure of the final rinse water.

(iii) The temperature of the wash water shall not be less than:

(a) one hundred and sixty-five (165) degrees F. for a single temperature stationary rack machine;

(b) one hundred and sixty (160) degrees F. for a single tank, conveyor, dual temperature machine;

(c) one hundred and fifty (150) degrees F. for a single tank, stationary rack, dual temperature machine; and

(d) one hundred and fifty (150) degrees F. for a multitank, conveyor, multitemperature machine.

When hot water is relied upon for sanitization in a mechanical warewashing operation, the temperature of the fresh hot water sanitizing rinse as it enters the manifold shall not be less than one hundred and sixty-five (165) degrees F. for a stationary rack, single temperature machine; or one hundred and eighty (180) degrees F. for all other machines. The temperature of the fresh hot water sanitizing rinse shall not be more than one hundred and ninety-four (194) degrees F. as it enters the manifold. The item being sanitized shall attain a temperature of one hundred and sixty (160) degrees F. on its surface during the final rinse. When a pumped rinse is provided, the water shall be at a temperature of at least one hundred and sixty (160) degrees F.

(iv) Conveyors in dishwashing machines shall be accurately timed to assure proper exposure times in wash and rinse cycles.

(v) An easily readable thermometer shall be provided in each tank of the dishwashing machine which will indicate the temperature of the water or solution therein. In addition, a thermometer shall be provided which will indicate the temperature of the final rinse water as it enters the manifold.

(vi) Jets, nozzles and all other parts of each machine shall be maintained free of chemical deposits, debris and other soil. Automatic detergent dispensers, if used, shall be kept in proper operating condition.

(c) Dishwashing may be done by machines using chemicals for sanitization, provided:

(i) The machines, chemical sanitizer and method of drying utensils are approved by the commissioner.

(ii) The temperature of the wash water shall not be less than one hundred and twenty (120) degrees F.; and

(iii) The wash water shall be kept clean; and

(iv) Adequate amounts of chemicals for washing, sanitizing and drying shall be available. Chemicals added for washing, sanitization and drying purposes shall be automatically dispensed, compatible, not interfering with the effective purpose of each other; and

(v) Utensils and equipment shall be exposed to the final chemical sanitizing rinse in accordance with the manufacturer's specifications for time and concentration; and

(vi) The chemical sanitizing rinse water temperature shall be not less than seventy-five (75) degrees F. nor less than the temperature specified by the machine's manufacturer; and

(vii) A test kit or other device that accurately measures the parts per million concentration of the solution shall be available and used.

(4) All kitchenware and food contact surfaces of equipment that have been used in the preparation or serving of food and drink, and all multi-use food storage utensils, exclusive of cooking surfaces of equipment, shall be thoroughly cleaned at least every four (4) hours. Cooking surfaces of equipment shall be cleaned at least once a day. All food temperature measuring devices, multi-use utensils and food contact surfaces of equipment used in the preparation or storage of potentially hazardous food shall be thoroughly cleaned and sanitized prior to such use and following: a change from working with raw animal foods to working with ready-to-eat foods; a change in the type of raw animal food such as beef, fish, lamb, pork, or poultry; use with raw fruit or vegetables prior to use with potentially hazardous food; and at any time during the operation when contamination may have occurred. Unless approved by the director of health for a different frequency of cleaning, equipment, food contact surfaces and utensils that have been used with potentially hazardous food shall be cleaned and sanitized at least every four (4) hours. Non-food contact surfaces of equipment shall be cleaned at such intervals as to keep them in a clean and sanitary condition.

(5) No article, polish or other substance containing any cyanide preparation or other poisonous material shall be used for the cleansing or polishing of utensils.

(k) After cleaning and until use, all food contact surfaces of equipment and multi-use utensils shall be so stored and handled as to be protected from contamination. All single-service eating and drinking articles shall be made from nontoxic materials, and shall have been manufactured, packaged, transported, stored, handled and dispensed in a sanitary manner, and shall be used only once. Drinking straws or any other device, hollow in nature, whereby through its use a beverage can be drawn into the mouth shall be separately wrapped either individually or in pairs with a sanitary protective covering for individual use. Catering food service establishments which do not have adequate and effective facilities for cleaning and sanitizing multi-use utensils shall use single-service articles.

(l) All garbage and rubbish containing food wastes shall, prior to disposal, be kept in a leak-proof, nonabsorbent container which shall be kept covered with tight fitting lids when filled or stored, or not in continuous use; provided such containers need not be covered when stored in a vermin-proofed room or enclosure or in a food waste refrigerator. All other rubbish shall be stored in containers, rooms or areas in an approved manner. The rooms, enclosures, areas and containers used shall be adequate for the storage of all food waste and rubbish accumulating on the premises. Adequate cleaning facilities shall be provided, and each container, room or area shall be thoroughly cleaned after the emptying or removal of garbage and rubbish. Food waste grinders, if used, shall be installed in compliance with state and local standards and shall be of suitable construction. All garbage and rubbish

shall be disposed of with sufficient frequency and in such a manner as to prevent a nuisance.

(m)(1) Except during necessary periods of preparation and service, potentially hazardous foods shall be maintained at forty-five (45) degrees F. or below, or one hundred forty (140) degrees F. or above, except beef roasts and pork roasts cooked to an internal temperature and time specified below may be held hot at one hundred thirty (130) degrees F. or above. The use of time only, rather than time in conjunction with temperature, may be permitted by the director of health and may be used as a public health control for a working supply of potentially hazardous food before cooking or for ready-to-eat potentially hazardous food that is displayed or held for service for immediate consumption if: the food is marked or otherwise identified with the time within which it shall be cooked, served, or discarded; the food is served or discarded within 4 hours from the point in time when the food is removed from temperature control; the food in unmarked containers or packages, or for which time expires, is discarded; and written procedures that assure compliance are maintained in the catering food service establishment and are made available to the authorized agent upon request. Except as specified raw food shall be cooked as follows:

(A) whole roasts, corned beef, and pork roasts shall be cooked to heat all parts of the food to the following minimum temperatures and corresponding minimum holding times: one hundred thirty (130) degrees F. for one hundred twenty-one (121) minutes; or one hundred forty (140) degrees F. for twelve (12) minutes; or one hundred forty-five (145) degrees F. for three (3) minutes;

(B) shell eggs, fish, meat and pork (other than whole roasts, corned beef, and pork roasts) shall be cooked to heat all parts of the food to at least one hundred forty-five (145) degrees F. for fifteen (15) seconds;

(C) all meat and fish products that are ground or comminuted shall be cooked to heat all parts of the food to at least one hundred and forty-five (145) degrees F. for three (3) minutes, one hundred and fifty (150) degrees F. for one (1) minute, one hundred and fifty-five (155) degrees F. for fifteen (15) seconds, or one hundred and fifty-eight (158) degrees F. instantaneously;

(D) game meats; poultry; ground or comminuted poultry; stuffed fish; stuffed meat; stuffed pasta; stuffed poultry; or stuffing containing potentially hazardous food ingredients shall be cooked to heat all parts of the food to at least one hundred sixty-five (165) degrees F. for fifteen (15) seconds;

(E) raw animal foods cooked in a microwave oven shall be: rotated or stirred throughout or midway during cooking to compensate for uneven distribution of heat; covered to retain surface moisture; heated to a temperature of at least one hundred sixty-five (165) degrees F. in all parts of the food; and allowed to stand covered for two (2) minutes after cooking to obtain temperature equilibrium;

(F) pasteurized eggs or egg products shall be substituted for raw shell eggs in the preparation of foods that are not thoroughly cooked such as caesar salad, salad dressing; hollandaise or barnaise sauce, mayonnaise, egg nog, ice cream, egg-fortified beverages, and in recipes requiring pooled eggs that are not cooked immediately.

Exempted from the above is a raw animal food such as raw egg, raw fish, raw-marinated fish; raw molluscan shellfish; steak tartare; or partially cooked food such as lightly cooked fish, rare meat, and soft cooked egg that is served or offered for sale in a ready-to-eat form. Pork and poultry products are not exempt from the required cooking times and temperatures. The consumer shall be informed of the

risks involved with the consumption of raw or undercooked animal food by means of posters, brochures, menu advisories, label statements, table tents, placards, or other written means available at the catering food service establishment which state: "thoroughly cooking meats, poultry, seafood, shellfish, or eggs reduces the risk of foodborne illness". Exemptions to the food temperature requirements shall not be allowed at catering food service establishments serving highly susceptible populations such as immunocompromised individuals or older adults in hospitals, nursing homes, or similar health care facilities as defined in Connecticut General Statutes section 19a-490 and that are subject to this section and preschool age children in a facility that provides custodial care and is subject to this section such as child day care centers as defined in Connecticut General Statutes section 19a-77(a)(1).

(2) Frozen food shall be kept at such temperatures as to remain frozen, except when being thawed for preparation or use. Potentially hazardous frozen food which consists in whole or in part of milk or milk products, eggs, meat, poultry, fish, shellfish, or other ingredients capable of supporting the rapid and progressive growth of infectious or toxigenic microorganisms, shall be thawed at refrigerator temperatures of forty-five (45) degrees F. or below; or under cool, potable running water seventy (70) degrees F. or below; or quick thawed as part of the cooking process; or by any other method satisfactory to the local director of health. Waste water from refrigeration equipment shall be disposed of in a proper manner.

(3) Cooked potentially hazardous foods shall be cooled from one hundred forty (140) degrees F. to seventy (70) degrees F. within two (2) hours, and from seventy (70) degrees F. to forty-five (45) degrees F. or below within four (4) additional hours. Potentially hazardous food that is cooked, cooled, and reheated for hot holding shall be reheated so that all parts of the food reach a temperature of at least one hundred sixty-five (165) degrees F. for fifteen (15) seconds, provided that remaining unsliced portions of roasts of beef that are cooked as specified in this subsection may be reheated for hot holding to one hundred forty-five (145) degrees F. for three (3) minutes. Reheating for hot holding shall be done within two (2) hours. Ready-to-eat food taken from a commercially processed, hermetically sealed container shall be heated to a temperature of at least one hundred forty (140) degrees F. for hot holding. Cooked, cooled, and refrigerated food that is prepared for immediate service in response to an individual consumer order may be served at any temperature.

(4) Food temperature measuring devices shall be provided and be readily accessible for use in ensuring attainment and maintenance of proper food temperatures. Food temperature measuring devices shall be accurate to \pm two (2) degrees F.

(n) All food and drink in catering food service establishments shall be from sources approved or considered satisfactory by the director of health, based on a determination of conformity with principles, practices, and generally recognized standards that protect public health; shall be in compliance with applicable state and local laws and regulations; shall be transported and delivered at required temperatures; and shall be clean, wholesome, free from spoilage, free from adulteration and misbranding and safe for human consumption. Any food or drink considered unsafe for human consumption shall be destroyed or disposed of in a manner satisfactory to the director of health. No hermetically sealed, non-acid or low-acid food which has been processed in a place other than a commercial food processing establishment shall be used. Molluscan shellfish shall be from sources listed in the most recent publication of the interstate certified shellfish shippers list distributed by the federal food and drug administration and approved or considered acceptable by the Connecticut Department of Agriculture, Bureau of Aquaculture, and, if shucked, shall be

kept until used in the containers in which they were received. Shell stock tags or labels shall be retained for 90 days from the date the container is emptied. Finfish shall be commercially and legally caught or harvested. Fluid milk and milk products shall be pasteurized and conform to grade A standards, the requirements of the United States Public Health Service, Food and Drug Administration "grade A pasteurized milk ordinance" and "grade A condensed milk ordinance." Shell eggs shall be from commercial, regulated sources inspected according to law and shall be received clean and sound, and shall be graded as required by law.

(o)(1) All food and drink while being stored, prepared, displayed, served or sold at catering food service establishments, or during transportation between such establishments, shall be protected from dust, flies, vermin, depredation and pollution by rodents, unnecessary handling, droplet infection, overhead leakage, or other contamination. Raw fruits and vegetables shall be washed before use. If used, single use gloves shall be used for only one task such as working with ready-to-eat food or with raw animal food, used for no other purpose, and discarded when damaged or soiled, or when interruptions occur in the operation.

(2) Food once served to the customer shall not be served again. Wrapped non potentially hazardous food which has not been unwrapped and which is wholesome may be re-served.

(3) All means necessary for the elimination of flies, roaches and rodents shall be used. All exposed food shall be stored at least eighteen (18) inches above the floor.

(4) Only such poisonous and toxic materials as are required to maintain sanitary conditions and for sanitization purposes may be used or stored in food service establishments. Poisonous and toxic materials shall be identified and shall be stored and used only in such manner and under such conditions as will not contaminate food and drink or constitute a hazard to employees or customers.

(p) Food employees shall wear clean outer garments, maintain a high degree of personal cleanliness and conform to hygienic practices. They shall wash their hands thoroughly in an approved handwashing facility before starting work. Food employees shall keep their fingernails trimmed, filed, and maintained so the edges and surfaces are cleanable and not rough. Food employees shall keep their fingers, nails, hands, and exposed portions of their arms clean by using a cleaning compound to lather hands and arms for at least 20 seconds, followed by thorough rinsing with clean water in a handwashing facility, and hand drying using approved sanitary towels or other approved hand drying device. Employees shall wash their hands thoroughly in an approved handwashing facility before starting work. Food employees shall clean their hands and exposed portions of their arms as often as may be required to remove soil and contamination; after touching bare human body parts; after using the toilet room; after caring for assistance animals; after coughing, sneezing, using a handkerchief or disposable tissue, using tobacco, eating, or drinking; after handling soiled equipment or utensils; when changing gloves; after handling money; immediately before engaging in food preparation including working with exposed food, clean equipment and utensils, and unwrapped single-service and single-use articles; during food preparation as often as necessary to remove soil and contamination and to prevent cross contamination when changing tasks; when switching between working with raw foods and ready-to-eat foods; and after engaging in other activities that contaminate the hands. Employees shall not expectorate in rooms in which food is prepared. Employees shall not use tobacco in any form while engaged in food preparation or service, or while in equipment and multi-use utensil washing or food preparation areas. Designated locations in such areas may

be approved by the local director of health for smoking, where no contamination hazards will result.

(q)(1) All parts of the establishment and its premises shall be kept neat, clean and free of litter and rubbish. Cleaning operations shall be conducted in such a manner as to minimize contamination of food and food contact surfaces. None of the operations connected with a catering food service establishment shall be conducted in any room used as living or sleeping quarters. Soiled linens, coats and aprons shall be kept in suitable containers until removed for laundering. No live birds or animals shall be allowed in any area used for the storage or preparation of food or for the cleaning or storage of utensils, or in toilet rooms or employees' dressing rooms or areas, in vehicles used for transporting food, or in any other area or facility used in the conduct of catering food service establishment operations; provided guide dogs or assistance dogs accompanying blind, deaf, or mobility impaired persons and dogs accompanying persons training such dogs as guide or assistance dogs as defined pursuant to the Connecticut General Statutes sections 46a-42, and 46a-44, may be permitted in dining rooms.

(2) Adequate facilities shall be provided for the orderly storage of employees' clothing and personal belongings. Where employees routinely change clothes within the catering food service establishment, one (1) or more dressing rooms or designated areas shall be provided for this purpose. Such designated areas shall be located outside of the food preparation, storage and serving areas, and the multi-use utensil washing and storage areas. When approved by the local director of health, such an area may be located in a storage room where only completely packaged food is stored. Such designated areas or dressing rooms shall be equipped with adequate lockers or other suitable facilities. Dressing rooms and lockers shall be kept clean and orderly.

(r) All vehicles used in the transportation of food or food products of all kinds shall be kept in a clean and sanitary condition.

(s) No person while affected with any disease in a communicable form, or while a carrier of such disease, or while afflicted with boils, infected wounds, sores, or any acute respiratory infection, shall work in any area of a catering food service establishment in any capacity in which there is likelihood of such person contaminating food, drink or food contact surfaces with pathogenic organisms, or transmitting disease to other individuals; and no person known or suspected of being affected with any such disease or condition shall be employed in such an area or capacity. If the management of the catering food service establishment has reason to suspect that any employee has contracted any disease in a communicable form or has become a carrier of such disease, he shall notify the local director of health immediately. When the local director of health has reasonable cause to suspect possibility of disease transmission from any catering food service establishment employee, the director of health shall secure a morbidity history of the suspected employee, or make such other investigation as may be indicated, and take appropriate action. The director of health may require any or all of the following measures:

(1) the immediate exclusion of the employee from all catering food service establishments;

(2) the immediate discontinuance of the catering food service operations concerned until, in the opinion of the director of health, no further danger of disease outbreak exists;

(3) restriction of the employees' services to some area of the catering food service establishment where there would be no danger of transmitting disease;

(4) adequate medical and laboratory examinations of the employee, or other employees, and of his and their body discharges; and

(5) food employees shall not contact exposed ready-to-eat food with bare hands and shall use suitable utensils such as deli tissue, spatulas, tongs, single use disposable gloves or dispensing equipment, except when washing raw fruits and vegetables to remove soil and other contaminants. Food employees shall minimize bare hand contact with exposed food that is not in a ready-to-eat form. Ready-to-eat food includes: unpackaged potentially hazardous food that is cooked to the temperatures and time required for the specific food under section 19-13-B49(m)(1); raw, washed, cut fruits and vegetables; whole, raw fruits and vegetables that are presented for consumption without the need for further washing, such as at a buffet; and other food presented for consumption for which further washing or cooking is not required and from which rinds, peels, husks, or shells are removed.

(t) (1) No person, firm or corporation shall operate or maintain a catering business for preparation or service of food within any town, city or borough without a local permit or license, or otherwise without registration of the name and business address with the local director of health of the town, city or borough in which the business is conducted, if such permit or license is required by local ordinance.

(2) Catering food service establishment classification. The director of health, registered sanitarian, or authorized agent shall classify each catering food service establishment by using the criteria outlined in this subdivision. Catering food service establishments shall be classified at the time of licensure, where licensure is required by local ordinance, or otherwise at the time of registration with the local director of health. The classification shall be reviewed by the director of health, registered sanitarian, or authorized agent during each inspection and in no case less than annually. The catering food service establishment shall be placed into the highest classification that describes any of the food operations conducted. When it comes to the attention of the director of health, registered sanitarian, or authorized agent that the operation has changed to a different class the director of health, registered sanitarian, or authorized agent shall reclassify the catering food service establishment. No catering food service establishment shall change food operations to a different classification without prior approval by the director of health, registered sanitarian, or authorized agent. The classes of catering food service establishments are as follows:

(A) Class I is a catering food service establishment with commercially prepackaged foods and/or hot or cold beverages only. No preparation, cooking or hot holding of potentially hazardous foods is included, except that commercially packaged precooked foods may be heated and served in the original package within four (4) hours.

(B) Class II is a catering food service establishment using cold or ready-to-eat commercially processed food requiring no further heat treatment and/or hot or cold beverages. No cooking, heating or hot holding of potentially hazardous foods is included, except that commercially packaged precooked foods may be heated and served in the original package within four (4) hours and commercially precooked hot dogs, kielbasa, and soup may be heated if transferred directly out of the original package and served within four (4) hours.

(C) Class III is a catering food service establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and consumed by the public within four (4) hours of preparation.

(D) Class IV is a catering food service establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and held for more than four (4) hours prior to consumption by the public.

(3) Qualified food operator required. Each person owning, operating or managing any catering food service establishment designated as class III or class IV shall be a qualified food operator or shall employ on-site at least one (1) qualified food operator who is in a supervisory position at said establishment. Each catering food service establishment shall be in compliance with this subdivision by August 1, 1997. Satisfactory evidence of compliance with this subdivision shall be documentation that the qualified food operator has passed a test administered by a testing organization approved by the department, or other documentation satisfactory to the department attesting to the individual's knowledge of safe food handling techniques as specified in subdivision (5) of this subsection. Said documentation shall be maintained on file at the catering food service establishment and provided to the local director of health, registered sanitarian, or authorized agent on request. Exempt from the requirements of this subdivision are special events sponsored by non-profit civic organizations such as, but not limited to, school sporting events, little league, and fairs. Any volunteer who serves meals for a nonprofit organization shall be exempt from the examination requirement for qualified food operators.

(4) Criteria for approval of testing organizations. To be approved, a testing organization shall make application to the department and therein demonstrate responsibility for all aspects of the testing system from the development of the test, through test administration including test security system, documentation of successful test completion and record maintenance. Testing organizations must reapply for approval every five (5) years. Testing organizations shall demonstrate responsibility for all of the following areas:

(A) Test development. The test shall be based on an objective job analysis to determine content areas and shall include, but not be limited to, elements that test the qualified food operator's knowledge of food allergies. The test shall be developed based on generally accepted standards of test development. A passing score study to set the required passing scores shall be conducted. Content validation and examination field test studies shall be conducted.

(B) Test security. The testing organization shall have test security systems to ensure the integrity of the test during all phases of test development and handling. Test administrators must be trained in test security procedures. Where client based testing is conducted, proctoring agreements that establish examination handling and proctoring procedures are required between the testing organization and the proctor. Different forms of the test shall be maintained.

(C) Test administration. The testing organization shall serve as the primary contact for individuals interested in the test. Explanatory test materials shall be available to interested parties. Guidelines for test administration shall be developed. The test shall be readily available to meet the needs of Connecticut.

(D) Documentation and record keeping. All individuals taking the test shall be provided documentation indicating whether they passed or failed the test. Statistics on the test including an item analysis shall be maintained. A registry of all individuals who have taken the test shall be maintained. Statistical and registry information shall be made available to the department and local health departments upon request.

(5) Other documentation satisfactory to the department. In the absence of documentation that the qualified food operator has passed a test administered by a testing organization approved by the department, a signed statement by the owner/operator of the catering food service establishment attesting that the qualified food operator has demonstrated knowledge of food safety as specified in subparagraphs (A) and (B) of this subdivision shall constitute satisfactory evidence of compliance with subdivision (3) of this subsection. The local director of health may require documen-

tation to support the signed statement. The following specific elements of knowledge and competence are required.

(A) Elements of knowledge

(i) Identify foodborne illness - define terms associated with foodborne illness; recognize the major microorganisms and toxins that can contaminate food and the problems that can be associated with the contamination; define and recognize potentially hazardous foods; define and recognize illness that can be associated with chemical and physical contamination; define and recognize the major contributing factors for foodborne illness; recognize how microorganisms cause foodborne disease.

(ii) Identify time/temperature relationship with foodborne illness - recognize the relationship between time/temperature and microorganisms (survival, growth, and toxin production); describe the use of thermometers in monitoring food temperatures.

(iii) Describe the relationship between personal hygiene and food safety - recognize the association between hand contact and foodborne illness; recognize the association between personal habits and behaviors and foodborne illness; recognize the association between health of a foodhandler and foodborne illness; recognize how policies, procedures and management contribute to improved food hygiene practices.

(iv) Describe methods for preventing food contamination from purchasing to serving - define terms associated with contamination: identify potential hazards prior to delivery and during delivery; identify potential hazards and methods to minimize or eliminate hazards after delivery.

(v) Identify and apply correct procedures for cleaning and sanitizing equipment and utensils - define terms associated with cleaning and sanitizing: apply principles of cleaning and sanitizing; identify materials, equipment, detergent, sanitizer; apply appropriate methods of cleaning and sanitizing; identify frequency of cleaning and sanitizing.

(vi) Recognize problems and potential solutions associated with facility, equipment, and layout - identify facility, design, and construction suitable for food establishments; identify equipment and utensil design and location.

(vii) Recognize problems and potential solutions associated with, temperature control, preventing cross contamination, housekeeping and maintenance - implement self inspection program: implement pest control program; implement cleaning schedules and procedures: implement equipment and facility maintenance program.

(viii) Identify and recognize the foods most commonly associated with food allergies.

(B) Demonstrable elements of competency

(i) Assess the potential for foodborne illness in a food establishment - perform operational food safety assessment: recognize and develop standards, policies and procedures; select and train employees: implement self audit/inspection program; revise policy and procedure (feedback loop): implement crisis management program.

(ii) Assess and manage the process flow - identify approved source: implement and maintain a receiving program: implement and maintain storage procedures: implement and maintain preparation procedures; implement and maintain holding service/display procedures; implement and maintain cooling and post preparation storage procedures. Implement and maintain re-service procedures. Implement and maintain transportation procedures.

(6) Replacement of qualified food operator. Whenever the qualified food operator terminates employment, is terminated or is transferred, the person owning, operating or managing the catering food service establishment shall notify the local health

department in writing. A replacement qualified food operator shall be employed within sixty (60) days from the date of termination or transfer of the qualified food operator. The local health department may grant an extension not to exceed an additional sixty (60) days to comply with this subdivision if deemed necessary.

(7) Responsibilities of qualified food operators

(A) The qualified food operator is responsible for operating the catering food service establishment in compliance with all the provisions of section 19-13-B49 of the Regulations of Connecticut State Agencies. The qualified food operator of each catering food service establishment shall be responsible for ensuring training of food preparation personnel. All such personnel shall receive training which shall include but not necessarily be limited to: instruction in proper food temperature control; food protection; personal health and cleanliness; and sanitation of the facility, equipment, supplies and utensils. Volunteers who serve meals for a nonprofit organization shall be exempt from the examination requirement for qualified food operators but shall receive training from any qualified food operator. The qualified food operator of each catering food service establishment shall maintain written documentation of a training program, and training records of individual employees, and shall make these records available to the local health department upon request. The owner, operator, manager or qualified food operator of a catering food service establishment at a nonprofit organization shall maintain such documentation and make such records available to the local health department upon request.

(B) The owner or manager of the catering food service establishment shall designate an alternate person who has complied with section 19-13-B49(t)(5) to be in charge at all times when the qualified food operator cannot be present. This alternate person in charge shall be responsible for: ensuring that all employees comply with the requirements of this section and that foods are safely prepared; handling emergencies; admitting the inspector; and receiving and signing the inspection report.

(u) Inspection of catering food service establishments. All catering food service establishments shall be inspected by the director of health, registered sanitarian, or an authorized agent of the director of health if such director, sanitarian or agent has been certified by the commissioner. Candidates for certification must be sponsored by a local director of health, and possess as minimum requirements a bachelors degree or three years experience in a food safety or regulatory food protection program acceptable to the department. Candidates shall not be involved in the ownership or management of a food establishment located within his jurisdiction. The certification program shall consist of a two stage process: 1) successful completion of classroom training and passing score on a final written exam; and 2) completion of a series of inspections with a certification officer from the Department Food Protection Program. Upon completion of the certification process, the department shall notify the director of health and the candidate in writing specifying the issuance of certification and expiration date. The commissioner shall have the authority to renew certification of each person conducting such inspections every three (3) years. Recertification may be granted upon the successful completion of sixteen (16) hours of approved food protection training every three years. The department shall be responsible for approving and assuring the provision of such training. Failure to comply with recertification requirements shall result in the certification to conduct inspections not being renewed. The department shall notify the director of health and the chief elected official of the affected food service jurisdiction when a certification is not renewed. All catering food service establishments shall be inspected in accordance with this subsection.

(1) Class I catering food service establishments shall be inspected at intervals not to exceed three hundred and sixty (360) days.

(2) Class II catering food service establishments shall be inspected at intervals not to exceed one hundred and eighty (180) days.

(3) Class III catering food service establishments shall be inspected at intervals not to exceed one hundred and twenty (120) days.

(4) Class IV catering food service establishments shall be inspected at intervals not to exceed ninety (90) days, except that an interval not to exceed one hundred and twenty (120) days may be allowed where one (1) of the inspections is a hazard analysis inspection.

(5) Access to establishments. The director of health, registered sanitarian or authorized agent after proper identification, shall be permitted to enter, at any reasonable time, any catering food service establishment for the purpose of making inspections to determine compliance with this section. He shall be permitted to examine the records of the catering food service establishment to obtain information pertaining to food and supplies purchased, received, or used, and persons employed, but not including financial records.

(6) Inspection records. Weighted values. Rating scores. Whenever the director of health, registered sanitarian or authorized agent makes an inspection of a catering food service establishment, he shall record his findings on an inspection report form included in this section and shall furnish a copy of such inspection report form to the owner or operator. Such form shall summarize the requirements of this section and shall set forth weighted point values for each such requirement. Forms, such as computer forms, that are substantially equivalent to the inspection form included in this section may be approved by the commissioner. Upon completion of an inspection, the director of health, registered sanitarian or authorized agent shall total the weighted point values for all requirements in compliance, such total becoming the rating score for the catering food service establishment. The total weighted point value shall be scored for each item in violation.

EHS-106-Rev. 06/01 **INSPECTION REPORT**
FOOD SERVICE ESTABLISHMENTS

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH
410 Capitol Avenue, MS#51FDP, Hartford, CT 06134

ROUTINE INSPECTION REINSPECTION
 PREOPERATIONAL OTHER

NAME OF ESTABLISHMENT _____
STREET ADDRESS _____
OWNER or OPERATOR _____

ESTABLISHMENT CLASS _____
TOWN _____
INSPECTION DATE and TIME _____

Based on an inspection this day, the items marked below identify the violations in operation or facilities which must be corrected by the date specified below.

SOURCES OF FOOD		
1	Approved source, wholesome, nonadulterated	4
2	Original container, properly labeled	1

FOOD PROTECTION		
3	Potentially hazardous food meets temperature requirements during storage, preparation, display, service, and transportation	4
4	Adequate facilities to maintain product temperature, thermometers provided	2
5	Potentially hazardous food properly thawed	2
6	Unwrapped or potentially hazardous food not reserved	4
7	Food protected during storage, preparation, display, service & transportation	2
8	Food containers stored off floor	2
9	Handling of food minimized	2
10	Food dispensing utensils properly stored	1
11	Toxic items properly stored, labeled, used	4

PERSONNEL		
12	Personnel with infection restricted	4

CLEANLINESS OF PERSONNEL		
13	Handwashing facilities provided, personnel hands washed, clean	4
14	Clean outer clothes, effective hair restraints	1
15	Good hygienic practices, smoking restricted	2

EQUIPMENT & UTENSILS: DESIGN, CONSTRUCTION & INSTALLATION		
16	Food-contact surfaces designed, constructed, maintained, installed, located	2
17	Nonfood-contact surfaces designed, constructed, maintained, installed, located	1
18	Single service articles, storage, dispensing	2
19	No reuse of single service article	2
20	Dishwashing facilities approved design, adequately constructed, maintained, installed, located	2

EQUIPMENT & UTENSILS : CLEANLINESS		
21	Preflushed, scraped, soaked and racked	1
22	Wash water clean, proper temperature	1
23	Accurate thermometers provided, dish basket, if used	1
24	Sanitization (rinse (hot water - chemical)	2
25	Clean wiping cloths	1
26	Food-contact surfaces of utensils & equipment clean	2
27	Nonfood-contact surfaces of utensils & equipment clean	1
28	Equipment/utensils, storage, handling	1

WATER SUPPLY		
29	Water source adequate, safe	4
30	Hot and cold water under pressure, provided as required	2

SEWAGE DISPOSAL		
31	Sewage disposal approved	4
32	Proper disposal of waste water	1

PLUMBING		
33	Location, installation, maintenance	1
34	No cross connection, back siphonage, backflow	4

TOILET FACILITIES		
35	Adequate, convenient, accessible, designed, installed	4
36	Toilet rooms enclosed with self-closing door	1
37	Proper fixtures provided, good repair, clean	1

HANDWASHING FACILITIES		
38	Suitable hand cleaner and sanitary towels or approved hand drying devices provided, tissue waste receptacles provided	1

GARBAGE/RUBBISH STORAGE & DISPOSAL		
39	Approved containers, adequate number, covered, rodent proof, clean	1
40	Storage area/rooms, enclosures - properly constructed, clean	1
41	Garbage disposed of in an approved manner, at approved frequency	1

VERMIN CONTROL		
42	Presence of insects/rodents	2
43	Outer openings protected against entrance of insects/rodents	1

FLOORS, WALLS & CEILINGS		
44	Floors: floor covering installed, constructed as required, good repair, clean	1
45	Floors, graded, drained as required	1
46	Floor, wall juncture covered	1
47	Mats removable, good repair, clean	1
48	Exterior walking, driving surfaces, good repair, clean	1
49	Walls, ceilings attached, equipment properly constructed, good repair, clean. Wall & ceiling surfaces as required.	1
50	Dustless cleaning methods used, cleaning equipment properly stored	1

LIGHTING & VENTILATION		
51	Adequate lighting provided as required	1
52	Room free of steam, smoke odors	1
53	Room & equipment hoods, ducts, vented as required	1

DRESSING ROOMS & LOCKERS		
54	Rooms adequate, clean, adequate lockers provided, facilities clean	1

HOUSEKEEPING		
55	Establishment and premises free of litter, no insect/rodent harborage, no unnecessary articles	1
56	Complete separation from living/sleeping quarters and laundry	1
57	Clean/soiled linens stored properly	1
58	No live birds, turtles, or other animals (except guide dogs)	1

SMOKING PROHIBITED		
59	Smoking prohibited, signs posted at each entrance	3

QUALIFIED FOOD OPERATOR		
60	Qualified Food Operator	3
61	Designated alternate	2
62	Written documentation of training program	2

DEMERIT SCORE			
4	3	2	1

TOTAL	RATING	Date Corrections Due

RISK FACTOR VIOLATIONS IN RED

Signature of Person in charge _____
SIGNED (Inspector) _____

DESCRIBE DEFICIENCIES ON CONTINUATION SHEETS

(v) Enforcement

(1) Every catering food service establishment shall maintain a rating score of eighty (80) or higher and shall not have one (1) or more four (4) demerit point items in violation, regardless of the rating score. The four (4) demerit point items include: food from approved source, wholesome, nonadulterated; potentially hazardous food meets temperature requirements during storage, preparation, display, service, and transportation; unwrapped or potentially hazardous food not re-served; toxic material properly stored, labeled, used; personnel with infections restricted; adequate handwashing facilities convenient, accessible, designed, installed, personnel hands washed, clean; water source, adequate, safe; sewage disposal approved and no nuisance; no cross-connection, back-siphonage, backflow; and adequate toilet facilities, convenient, accessible, designed, installed. If the rating score is below eighty (80) or if there is one (1) or more four (4) demerit point items in violation at the time of inspection, the director of health, registered sanitarian or authorized agent shall order correction of the items in violation within two (2) weeks. After the two (2) weeks, the director of health, registered sanitarian or authorized agent shall make a reinspection and determine the new rating score.

(2) If the rating score at the time of the reinspection is below eighty (80) or if there is one (1) or more four (4) demerit point items in violation, the director of health shall take immediate steps to have the catering food service establishment closed.

(3) However, if there are insanitary or other conditions in the operation of a catering food service establishment which in the judgment of the director of health constitutes an immediate and substantial hazard to the public health, he may immediately issue a written notice to the permit holder or operator citing such condition, specifying the corrective action to be taken, and specifying the time period within which such action shall be taken, and, if deemed necessary order immediate correction. If correction is not made in the stated time, a written order shall be issued to close the catering food service establishment.

(4) If the rating score is eighty (80) or above, the director of health, registered sanitarian or authorized agent shall order correction of any violations and specify time for correction. If a qualified food operator is not employed on-site, except as provided by the qualified food operator replacement provision in section 19-13-B49(t)(6), the catering food service establishment has thirty (30) days to comply. If correction has not been made after thirty (30) days, the director of health shall take immediate steps to close the catering food service establishment. The catering food service establishment shall also be reinspected as frequently as necessary in the determination of the local director of health to maintain compliance with this section.

(5) The owner or operator of any catering food service establishment may at any time request an inspection for the purpose of improving the rating score of the catering food service establishment. Within ten (10) days following receipt of a request including a signed statement that the violations have in the applicant's opinion, been corrected, the director of health, registered sanitarian or authorized agent shall make an inspection and thereafter as many additional inspections as he may deem necessary to assure himself that the applicant is complying with the requirements of this section.

(6) The owner or operator of a catering food service establishment aggrieved by an order may, within forty-eight (48) hours after such order, appeal to the director of health, who shall thereupon immediately examine into the merits of such case and may vacate, modify or affirm such order. The owner or operator of a catering

food service establishment who is aggrieved by such action of the director of health may, no later than three (3) business days after receipt of the order, appeal to the commissioner of health who shall thereupon immediately notify the authority from whose order the appeal was taken and examine into the merits of such case and may vacate, modify or affirm such action.

(Effective January 27, 1975; amended April 25, 1994, April 25, 1997, July 6, 2001, October 3, 2005, July 3, 2007)

Sec. 19-13-B50. Public and semi-public water supplies

In the case of public or semi-public water supplies or water supplies developed for a considerable number of persons necessitating higher rates of pumpage than for residential use, separating distances between wells or springs and sewage disposal systems or drains shall be established in accordance with the provisions of section 25-33 of the general statutes and of section 19-13-B39.

Sec. 19-13-B51.

Repealed, January 12, 1971.

Sec. 19-13-B51a. Effective date

The provisions of section 19-13-B51a to 19-13-B51l, inclusive, shall be applicable to all water supply wells constructed after the effective date.

(Effective January 12, 1971)

Sec. 19-13-B51b. Definitions

As used in sections 19-13-B51a to 19-13-B51l, inclusive:

(1) "Water supply well" means an artificial excavation, constructed by any method, for the purpose of getting water for drinking or other domestic use;

(2) "Well contractor" means any person, firm or corporation drilling or constructing a water supply well;

(3) "Aquifer" means a water-bearing earth material which can transmit water in significant quantity. It can be either consolidated rock (ledge rock) or unconsolidated material (sand, gravel, soil with boulders, etc.);

(4) "Dug well" means a well excavated into a shallow aquifer;

(5) "Spring" means a place where, without planned intervention of man, water flows from consolidated rock or unconsolidated material on land or into a body of surface water such as a lake, stream, or river. A spring shall have the same protection requirements as a dug well.

(6) "Driven well" means a well which is constructed by driving a permanent casing with a screen area into unconsolidated material. Driven wells do not penetrate consolidated rock;

(7) "Gravel well" means a well constructed into unconsolidated material. In the zone immediately surrounding the well screen more permeability is obtained by hydraulic action or by removing the finer formation material and replacing it with artificially graded coarser material;

(8) "Drilled well" means a well constructed by drilling a hole and inserting a casing to support the sides of the hole. The portion of the well which is in consolidated rock may not require support of a casing;

(9) "Annular space" means the space between two objects, one of which is surrounded by the other. This includes space between the wall of an excavation and the wall of a pit; between the wall of an excavation and the casing of a well, or between two casings;

(10) “Casing” means an impervious, durable pipe or sidewall placed in a well to prevent the walls from caving, or to seal off surface drainage or undesirable water, gas, or other fluids so they cannot enter the well;

(11) “Established grade” means the elevation of the finished ground surface at the point of intersection of the well casing;

(12) “Pollution” means the adverse effect on water quality created by the introduction of any matter;

(13) “Sewer” means a conduit or pipe used or intended for conveying sewage or other contaminated wastes, or such conduit or pipe into which sewage or wastes may back up;

(14) “Source of pollution” means any place or condition which may result in pollution of a ground water supply; it may include a stream, pond, sewer, privy, septic tank, tile field, cesspool, sewage, sewage treatment unit, industrial waste, industrial waste disposal unit, location where animal excrement is allowed to accumulate, or disposal site for refuse, industrial waste, sewage sludge or industrial waste sludge;

(15) “Well top seal” means an arrangement used to establish a watertight junction at the top of the casing of a well with special regard to the piping or equipment installed therein;

(16) “Well vent” means a piped outlet at the upper end of a well to allow maintenance of atmospheric pressure within the well casing;

(17) “Well pit” means a structure built wholly or partly underground to house the well top or well appurtenances or both;

(18) “Yield” means the quantity of water delivered per unit of time which may flow or be pumped continuously from the well;

(19) “Public supply well” means a water supply well used or made available by a water company to two or more consumers, as defined in section 25-32a of the 1969 supplement to the general statutes.

(Effective January 12, 1971)

Sec. 19-13-B51c. Interconnections

No physical connection between piping carrying water from a public water supply and piping carrying water from any other source shall be permitted unless such other water supply is of safe, sanitary quality and the interconnection is approved by the commissioner of health.

(Effective January 12, 1971)

Sec. 19-13-B51d. Location

All separating distances are to be measured horizontally.

(a) Wells with a required withdrawal rate of under ten gallons per minute.

(1) Each such well shall be located at a relatively high point on the premises consistent with the general layout and surroundings; be protected against surface wash; be as far removed from any known or probable source of pollution as the general layout of the premises and the surroundings will permit; and, so far as possible, be in a direction away from ground water flow from any existing or probable source of pollution.

(2) No such well shall be located within seventy-five feet of a system for disposal of sewage or other source of pollution. Greater separating distances shall be required for certain industrial wastes or certain rock formations. If a sewer is constructed of extra heavy cast iron pipe with leaded joints or equal approved type of tight joint, a minimum separating distance of twenty-five feet shall be maintained.

(3) No such well shall be located within twenty-five feet of the high water mark of any surface water body, nor within twenty-five feet of a drain carrying surface water or of a foundation drain.

(b) Wells with a required withdrawal rate of from ten to fifty gallons per minute.

(1) Each such well shall be located at a relatively high point on the premises consistent with the general layout and surroundings; be protected against surface wash; be as far removed from any known or probable source of pollution as the general layout of the premises and the surroundings will permit; and, so far as possible, be in a direction away from ground water flow from any existing or probable source of pollution.

(2) No such well shall be located within one hundred fifty feet of a system for disposal of sewage or other source of pollution. Greater separating distance shall be required for certain industrial wastes or certain rock formations. If a sewer is constructed of extra heavy cast iron pipe with leaded joints or equal approved type of tight joint, a minimum separating distance of seventy-five feet shall be maintained.

(3) No such well shall be located within fifty feet of high water mark of any surface water body, nor within fifty feet of a drain carrying surface water or of a foundation drain.

(c) Wells with a required withdrawal rate of more than fifty gallons per minute.

(1) Location of such well shall be approved by the state department of health in accordance with the provisions of section 25-33 of the 1969 supplement to the general statutes and section 19-13-B39 of the public health code.

(2) Each such well shall be located at a relatively high point on the premises consistent with the general layout and surroundings; be protected against surface wash; be as far removed from any known or probable source of pollution as the general layout of the premises and the surroundings will permit; and, so far as possible, be in a direction away from ground water flow from any existing or probable source of pollution.

(3) No such well shall be located within two hundred feet of a system for disposal of sewage or other source of pollution. If conditions warrant, greater distance shall be required. Sanitary conditions in the area within the radial distance required shall be under control of the well owner by ownership, easement, or other arrangement approved by the commissioner of health. If a sewer is constructed of extra heavy cast iron pipe with leaded joints or equal approved type of tight joint, a minimum separating distance of one hundred feet shall be maintained.

(4) No such well shall be located within fifty feet of the high water mark of any surface water body nor within fifty feet of a drain carrying surface water or of a foundation drain.

(Effective January 12, 1971)

Sec. 19-13-B51e. Precautions

A well under construction shall be protected so that there can be no drainage or surface wash into the well. Workmen employed in such construction shall exercise sanitary precautions in disposal of wastes and handling of construction materials so as to avoid contamination of the well and aquifer. All water used in constructing a well shall be disinfected with fifty milligrams per liter (parts per million) of chlorine in order to protect the well from contamination. No polluted water shall be used in connection with the construction of a well.

(Effective January 12, 1971)

Sec. 19-13-B51f. Construction

(a) **Materials.** Pipe used for casing a well other than a dug well shall be made of steel or other material approved by the commissioner of health. They shall be free from flaws or defects and shall have watertight connections.

(b) **Dug well.** The casing or side walls of a dug well shall be constructed of watertight concrete at least four inches thick to a depth of at least ten feet below the ground surface. Below the depth of the watertight casing, loosely laid stone, concrete block, brick or other materials approved by the commissioner of health may be used. The annular space between the face of the excavation and the watertight section of casing shall be filled with clean clay or other impervious material.

(c) **Gravel well.** The casing of a gravel well shall be surrounded with concrete grout to a depth of at least ten feet below the ground surface. The annular space between the casings of a gravel well with artificially placed gravel shall be protected at the top by a watertight covering to prevent any foreign matter entering the well through the gravel.

(d) **Drilled well.** The construction of a drilled well shall provide for shutting out all water except that from the water bearing formations which are intended to supply water to the well. The casing shall extend at least ten feet below ground surface. Any annular space surrounding the casing pipe needed for drilling shall be filled with concrete grout to a depth of at least ten feet below the ground surface. Below ten feet, any clean fill material can be used. Where the unconsolidated material above consolidated rock is less than twenty feet deep and the casing ends in the consolidated rock, the casing shall be effectively sealed in the rock.

(e) **Upper terminal of casing.** The casing of every well shall project not less than six inches above the established grade at the well or above the pump house floor. The well contractor shall ascertain the established grade before completion of the well. Where a pitless adapter is used, it shall be designed to, and made of materials that will, keep soil and water from entering the well during the life of the casing. A below-ground connection shall not be submerged in water at the time of installation. Where a pump is not installed immediately following the construction of the well, the well shall be tightly sealed and suitably vented.

(Effective January 12, 1971)

Sec. 19-13-B51g. Covering

The cover of the dug well shall be made of substantial reinforced concrete at least four inches thick. Other material approved by the commissioner of health may be used. It shall be of sufficient diameter to overlap the casing or side walls by at least two inches. A tight joint shall be provided between the casing and cover. If a pump is set on the slab, the top of the slab shall be sloped to drain away from the pump or drop pipe sleeve.

(b) A manhole shall be installed if the cover slab cannot be readily removed, and such manhole shall be provided with a curb extending at least two inches above the slab and equipped with a watertight overlapping cover. The manhole cover shall be locked or bolted in place in such manner as to prevent tampering or shall be located in a locked housing.

(Effective January 12, 1971)

Sec. 19-13-B51h. Well pits

(a) The use of a well pit shall be avoided whenever practical. When used, it shall be large enough to permit ready access to equipment.

(b) A well pit and its juncture with any other structure shall be watertight, or suitably drained to insure dryness as provided in section 19-13-B51i.

(c) Every conduit or similar connection with a well pit shall be made watertight.
(Effective January 12, 1971)

Sec. 19-13-B51i. Well pit drains

(a) Where there is no danger of flood or back flow, the water from a pit shall be drained onto the surface of the ground. The pipe used shall be at a grade of not less than one-eighth inch per foot toward the outlet. The junction between the pit floor and the drain pipe shall be made watertight. The drain pipe and joints shall be watertight to a distance of twenty-five feet from the pit. Any drain to the ground surface shall be screened to prevent entrance of animals and insects.

(b) No well pit drain shall be connected directly with any sewer, house drain or storm drain. The drainage of any well pit shall not be dependent on the operation of any pumping system except where gravity drainage at the location cannot be secured, in which case automatic sump pumps may be installed with the concurrence of the approving authority.

(c) When a well pit is constructed in impervious soil, no porous material shall be used as a base under the well pit floor. If fill is required, it shall be clean, impervious earth, well tamped.
(Effective January 12, 1971)

Sec. 19-13-B51j. Permanent appurtenances

(a) Any equipment, piping or appurtenance, permanently installed in a well, shall be joined watertight to the well casing at the point of entrance to the well by a well top seal or equally effective means.

(b) Every well in which the drawdown is ten feet or more shall be fitted with an adequate air vent. Such vent shall be extended to the height of at least twelve inches above any possible high water level. The vent shall be shielded and screened in such manner as to permit the entrance of air but keep out foreign matter.

(c) The foundation for a reciprocating pump shall be constructed with sufficient clearance around the well casing and the base of the power head to permit the assembly in place of a watertight well top seal. The well casing shall extend at least six inches above the floor.

(d) The foundation for a turbine type pump may be of concrete upon which the power head may rest directly. It shall be so constructed that the well opening is adequately covered and all openings through the base shall be sealed watertight. The well casing shall be installed at least six inches above the floor.

(e) A hand pump shall be constructed so that a stuffing box or other arrangement prevents entrance of contamination around the pump rod. The pump spout shall be of covered type. The base shall be of the one-piece flange type. Provision shall be made for leading waste water away from the top of the well. A hand pump shall be frostproof and shall not require priming. A hand pump shall be mounted:

(1) When a well is cased with iron pipe, upon a base flange which is attached rigid and watertight to the well casing; (2) on a concrete platform or similar structure when a well is not cased with iron pipe. A metal sleeve shall be used through the concrete platform or cover slab and extend above the slab into the pump base; or (3) by other sanitary method approved by the commissioner of health.

(Effective January 12, 1971)

Sec. 19-13-B51k. Post-construction

(a) On completion of the well, the well contractor shall pump or otherwise flush the well sufficiently to clear the water of cuttings.

(b) The well contractor shall make a yield test to determine the quantity and stability of flow of water from the well. The date of the test and the maximum drop in water level in the well during the test shall also be recorded (drawdown). The rate of test pumping shall equal or exceed the rate of withdrawal required for the particular installation. In the case of nonpublic water supply wells with a required withdrawal rate less than ten gallons per minute, the pumping period during the drilling and clearing may be included in the time of the yield test. The minimum length of such yield test shall be four hours for a well with a required withdrawal rate of less than ten gallons per minute;* thirty-six hours for a well with the required withdrawal rate of from ten to fifty gallons per minute; and seventy-two hours for a well with a required withdrawal rate of more than fifty gallons per minute. Test pumping shall be continuous at a constant rate for the period required. In the case of a public well, drawdown shall have held essentially stable for the last twelve hours prior to the completion of the test. The well contractor or tester shall record the date of the yield test; the water level in the well shortly before the yield test begins; the length of the pumping period; the constant pumping rate; the water level in the well at reasonable intervals after pumping begins and within five minutes before the pumping ends; and the water level in the well at reasonable intervals thereafter for a sufficient time to allow recovery to the water level prior to the yield test. He shall furnish a copy of such record to the owner.

(c) The pump installer shall disinfect each new well system before use. Disinfection shall be accomplished by treating the water in the well, storage tank and connected piping with a chlorine solution of fifty milligrams per liter (parts per million) strength so as to obtain a residual of ten milligrams per liter (parts per million) of chlorine after three hours detention. The side walls and piping shall be rinsed with the chlorine solution. The chlorinated water shall not be removed from the water system until after a detention period of at least three hours.

(Effective January 12, 1971)

Sec. 19-13-B51l. Testing

Public water supply wells shall be sampled by the state department of public health or local director of health for bacteriological, physical and sanitary chemical examination. Approval of the commissioner of public health shall be obtained before the well water is made available for use.

(Effective January 12, 1971; amended December 30, 1996)

Sec. 19-13-B51m. Well permits

(a) Subject to subsections (b) and (c) below no water supply well permit shall be given until it has been demonstrated to the satisfaction of the director of health that public sewers are available or a subsurface sewage disposal system can be installed on the lot in compliance with Sections 19-13-B103a to 19-13-B104d, inclusive of the Regulations of Connecticut State Agencies.

* An alternate test for low yield wells serving a single family: Remove all water from the completed well and measure rate of recovery.

1. If the recovery is observed for twelve hours or more, the actual amount of water recovered in the first twelve hours shall be the yield, expressed in gallons.

2. If at least three hundred gallons are recovered in less than twelve hours, the yield expressed as gallons/day shall be computed by the formula $\frac{\text{twelve}}{\text{hours recovery}}$ times gallons recovered.

(b) No water supply well permit shall be given by the director of health:

(1) To premises used for human occupancy when a community water supply system having at least fifteen service connections or regularly serving at least twenty-five individuals is deemed available if the boundary of the parcel of property in which the premises is on or will be located on is within two hundred feet, measured along a street, alley or easement, of the approved water supply: or

(2) To non-residential premises, where the water may be used for human consumption, when a community water supply system having at least fifteen service connections or regularly serving at least twenty-five individuals is deemed available if the boundary of the parcel of property in which the premises is on or will be located on is within two hundred feet, measured along a street, alley or easement, of the approved water supply.

(c) The commissioner of health services, or his or her designee, may grant an exception to subsection (b) above upon a finding that such exception will not adversely affect the purity and adequacy of the supply nor the service of the system or it is determined that:

(1) The community water system which serves the premises is unable to provide such premises with a pure and adequate supply of water: or

(2) If construction problems warrant such action.

(Effective February 2, 1988)

Sec. 19-13-B52. Food or beverage vending machine operations

No person, firm or corporation shall operate or maintain within the state any self-service vending machine offered for public use which, upon insertion of a coin, coins or token or by other means, dispenses unit servings of food or beverages, either in bulk or package, without replenishing the device between each vending operation, except after compliance with the following requirements:

(a) All foods, beverages and ingredients offered for sale through vending machines shall be manufactured, processed and prepared in establishments which comply with all applicable local, state and federal laws and regulations. All packaged foods or beverages shall be labeled in compliance with the Uniform Food, Drug and Cosmetic Act* as to contents and source. A clearly identifiable plate or tag indicating the name and address of the person, firm or corporation responsible for service shall be attached in a conspicuous place to any vending machine in use.

*G.S. Ch. 342

(b) All foods, beverages and ingredients offered for sale through vending machines shall be wholesome and free from spoilage, contamination and adulteration.

(c) Prior to sanitary storage in a vending machine, all foods, beverages, and ingredients, including accessory foods and implements, shall be stored or packaged in clean protective containers and shall be handled, transported and vended in a sanitary manner. Wet storage of package products is prohibited.

(d) * * * *Potentially hazardous* food or drink (examples are custard-filled and cream-filled pastries, milk and milk products, egg products, meat, fish, fowl, shell-fish, gravy, and those sauces, dressings, stuffings and salads, which contain meat, fish, fowl, eggs, milk or milk products) offered for sale through vending machines shall be dispensed to the consumer in the individual original container or wrapper into which it was placed at the plant of the manufacturer, processor or distributor, or such products shall be dispensed into single service containers. In those vending machines dispensing * * * *potentially hazardous* foods, beverages or ingredients in bulk, the bulk supplies of such foods, beverages or ingredients shall be transferred only to a bulk vending machine container and appurtenances which are clean and

have been subjected to an approved * * * *sanitizing* process. * * * *Potentially hazardous* foods or ingredients within the vending machine shall be maintained at a temperature * * * *of 45°F., or below* or a temperature of 140°F or above. Vending machines dispensing * * * *potentially hazardous* foods shall be provided with controls which insure the maintenance of said temperatures at all times; provided an exception may be made for the actual time required to fill or otherwise service the machine and for a maximum recovery period of thirty minutes following completion of filling or servicing operations and for the period of heating refrigerated foods to be served hot. Such controls shall also place the machine in an inoperative condition until serviced by the operator, in the event of power failure or other condition which permits the food storage compartment to attain a temperature above 45°F. or below 140°F., whichever is applicable. Vending machines dispensing * * * *potentially hazardous* food shall be provided with a thermometer which, to an accuracy of plus or minus 2°F., indicates the air temperature of the food storage compartment. In case of any shut-down of the temperature regulating equipment for a period longer than two hours or in any case where * * * *potentially hazardous* food has been adversely affected by change of temperature following a shut-down, * * * *potentially hazardous* food shall be removed from the vending machine and discarded. * * * *Potentially hazardous* foods and beverages while in transit shall be maintained at a temperature not higher than 45°F. or not lower than 140°F., *whichever is applicable*.

(e) Milk and fluid milk products offered for sale through vending machines shall be dispensed only in individual, original containers or from bulk containers into which such product was placed at the milk plant; provided, in the case of vending machines that use fluid milk products as an ingredient in hot liquid foods or beverages, such milk product may be transferred at the machine location from the individual, original container of not more than one-half gallon capacity to a vending machine bulk container which is clean and has been subjected to an approved * * * *sanitizing* process in accordance with subsection (g), * * * *and provided* in such transfer the entire contents of the individual, original container *shall be used*.

(f) All multi-use parts of any bulk milk vending machine which come into direct contact with the milk or milk product shall be effectively cleaned and * * * *sanitized* at the milk plant; provided single-service dispensing tubes which receive * * * *sanitizing* treatment at the fabricating plant and which are individually packaged in such manner as to preclude contamination are exempted from this provision. The can or other bulk milk container shall be filled only at the milk plant and shall be sealed with two seals in such manner as to make it impossible to withdraw any part of its contents without breaking one seal and make it impractical to introduce any substance without breaking the other seal. The delivery tube and any milk contact parts of the dispensing device shall be attached at the milk plant and shall be protected by a moisture-proof covering or housed in a compartment with a moisture-tight closure, which shall not be removed until after the container is placed in the refrigerated compartment of the vending machine.

(g) With the exception of product contact surfaces of bulk milk vending machines for which separate provisions for cleaning and * * * *sanitizing* are specified in subsection (f), all multi-use containers or parts of vending machines which come into direct contact with * * * *potentially hazardous* foods, beverages or ingredients shall be removed from the machine daily and shall be thoroughly cleaned and effectively subjected to an approved * * * *sanitizing* process at the plant of the producer or distributor or other approved facility; provided the requirement for daily

cleaning and * * * sanitizing treatment may be waived for those contact surfaces which are maintained at all times at a temperature of not higher than 45°F. or at a temperature of not lower than 140°F., whichever is applicable. * * * Contact surfaces shall receive such periodic cleaning and * * * *sanitizing* treatment as may be necessary. All parts, after cleaning and * * * *sanitizing* treatment, shall be protected from contamination.

(h) All parts of vending machines which come into direct contact with other than * * * *potentially hazardous* foods shall be thoroughly cleaned and subjected to * * * *sanitizing* treatment.

(i) All single service containers, which receive food or beverage from machines dispensing such products in bulk, shall be purchased in sanitary cartons or packages which protect the containers from contamination, shall be stored in a clean dry place until used and shall be handled in a sanitary manner. Such containers shall be stored in the original carton or package in which they were placed at the point of manufacture until introduced into the container magazine or dispenser of the vending machine. Single service containers stored within the vending machine shall be protected from manual contact, dust, insects, rodents and other contamination.

(j) Each vending machine shall be located in a well-lighted room, area, or space which can be maintained in a clean condition and which is protected from overhead leakage from drains and piping *or other contamination*. Each vending machine shall be located so that the space around and under the machine can be readily cleaned and so that insect and rodent harborage is not created.

(k) The floor area upon which vending machines are located shall be *in good repair*, reasonably smooth and of cleanable construction, and be capable of withstanding repeated washing and scrubbing. This space and the immediate surroundings of each vending machine shall be maintained in a clean condition.

(l) The exterior construction of the vending machine shall be such as to facilitate cleaning and to minimize the entrance of insects and rodents, and the exterior of the machine shall be kept clean. Service connections shall be such as to protect against unintentional or accidental interruption of service to the machine.

(m) All interior surface and component parts of the vending machine shall be so designed and constructed as to permit easy cleaning, and shall be kept clean. All product contact surfaces of the machine shall be of smooth, nontoxic, corrosion resistant, and relatively nonabsorbent material, and shall be capable of withstanding repeated cleaning and * * * *sanitizing* treatment by normal procedures. *Such surfaces* shall be protected against contamination.

(n) Water used in vending machines shall be of a safe and sanitary quality.

(o) In all vending machines which dispense carbonated beverages and which are connected to a water supply system, the ingredient water contact surfaces from the check valves or other protective device downstream, including the device itself, shall be of such materials as to preclude the production of toxic substances which might result from interaction with carbon dioxide or carbonated water. Materials such as copper, lead, zinc or cadmium are not acceptable.

(p) All wastes shall be properly disposed of and, pending disposition, shall be kept in suitable containers so as to prevent creating a nuisance.

(q) Foods, beverages and ingredients, and product contact surfaces of containers, equipment and supplies, shall be protected from contamination while in transit to machine location.

(r) Employees shall keep their hands clean and shall wear clean outer garments while engaged in handling foods or beverages or product contact surfaces of utensils

or equipment. No such employee shall resume work after using the toilet room without first washing his hands.

(s) No person, firm or corporation shall operate vending machines as herein described in any town, city or borough without local permits or licenses if such permits or licenses are required by local ordinances, or otherwise without notification of local directors of health of towns, cities or boroughs in which vending machines are located of the name and business address of the operator and the location of the machines. Machines vending only beverages in sealed cans or bottles, other than milk or milk products, are excepted from such notification.

(t) The operator of any food or beverage vending machine shall make provision for the local director of health or his representative to have access, either in company with an employee or otherwise, to the interior of all vending machines operated by him. The operator shall promptly comply with a request from the local director of health for such access or inspection.

(u) When so ordered by a local director of health, a vending machine failing to meet the requirements of this regulation shall be removed by any person, firm or corporation operating or maintaining such vending machine.

(Effective October 8, 1963)

APPENDIX

APPROVED * * * SANITIZING PROCESSES

When manual dishwashing is used, utensils after thorough washing and rinsing, clean to sight and touch, shall be sanitized by:

(a) Immersion for at least *one minute* in clean, hot water at a temperature of at least 170°F. * * * An approved thermometer shall be available convenient to the vat. The pouring of scalding water over the washed utensils shall not be accepted as satisfactory compliance; or

(b) Immersion for at least *one minute* in a * * * *sanitizing solution* containing (1) at least 50 * * * *mg/l* of available chlorine * * * *at a temperature of not less than 75°F*. The bath should be made up to a strength of 100 *mg/l* or more of * * * *available chlorine* and shall not be used after its strength has been reduced to 50 * * * *mg/l*; or (2) at least 12.5 *mg/l* of available iodine in a solution having a pH value not higher than 5.0 and a temperature of not less than 75°F., or (3) any other chemical sanitizing agent which has been demonstrated to the satisfaction of the director of health to be effective and nontoxic under use conditions, and for which a suitable field test is available. Such sanitizing agents, in use solutions, shall provide the equivalent bactericidal effect of a solution containing at least 50 *mg/l* of available chlorine at a temperature not less than 75°F.

(Effective October 8, 1963)

(See 1963 Supp. § 19-193h.)

SANITATION FOR AGRICULTURAL AND MIGRATORY FARM WORKERS

Sec. 19-13-B53. Water supplies and privies for field workers

(a) Water shall be readily available to both shed and field workers in covered containers with sanitary drinking fountains or with individual paper cups, in accordance with section 19-13-B35.

(b) Water for drinking and handwashing shall be obtained from a public water supply or from a properly protected and located ground water supply approved by the local director of health.

(c) No common drinking cup shall be permitted.

(d) Handwashing facilities shall be available for shed and field workers.

(e) Water containers shall be cleaned daily. At the start of the season and at other times when necessary, water barrels or other water containers shall be disinfected with steam or chlorine. The plug for filling the hole shall be kept tightly in place except during the time for filling. (It is desirable to chain the plug to the barrel to avoid losing it.)

(f) A sanitary method of filling water barrels shall be provided. Overhead hoses shall be short enough so that they will swing clear of ground surface. Flange guards should be provided for the hose so that it will not enter more than four inches into water barrels.

(g) Portable or permanent privies shall be provided in adequate numbers and shall be readily accessible to all workers.

(h) Separate privies shall be provided for men and women and shall be so arranged as to secure privacy for both sexes and shall be clearly marked "Men" and "Women" at the entrance to each. These words shall be printed or painted on signs not less than six by eighteen inches.

(i) Privies shall be provided with inside hook and eye latches and toilet tissue.

(j) Privies shall be located at least one hundred feet from kitchen and dining rooms, living quarters or source of water supply.

(k) Privies shall be of fly and vermin-proof construction and shall consist of a pit at least three feet deep and constructed so as to exclude surface water. Cracks shall be battened and openings shall be screened with sixteen mesh wire screening. The door shall be well fitted to exclude flies and shall close automatically by means of a spring or spring hinges. Seat covers shall be hinged and shall be so constructed that they drop automatically into place when the seat is not occupied.

(l) Privies shall be adequately lighted and ventilated.

(m) No privy pit shall be filled with excreta to nearer than one foot from the surface of the ground. When this occurs, privies shall be moved or vaults cleaned out. The hole shall be filled up when privies are moved. Material removed from the privy or vaults or containers shall be disposed of by burial in such a manner as not to create a nuisance.

(n) Privies shall be maintained in clean condition and such maintenance shall include daily washing of seats with a disinfectant solution. (Use of earth, ashes or lime in the pits will help to keep down odors.)

(See 1963 Supp. § 22-17a; Reg. 22-17a-1.)

Sec. 19-13-B54. First aid kits for field workers

Standard first aid kits shall be kept in every shed where work is going on and shall be readily available to all workers.

(See Reg. 22-17a-2.)

Sec. 19-13-B55. Sanitary requirements for housing of workers

(a) Housing shall be constructed in such a manner as to be structurally safe, adequate in size and reasonably easy to keep clean.*

*Note: It is important that the provisions of the state statutes relating to fire prevention and safety and all regulations made pursuant thereto be complied with.

(b) For new construction after June 7, 1960, the window area of each room for living quarters, sleeping quarters, preparation of food or mess halls shall be at least one-eighth of the floor area and so constructed that at least one-half of the window

area may be opened for ventilation. When buildings existing on said date are converted for housing purposes, window area and ventilation shall conform as nearly as possible to the above, but in any case shall meet with the approval of the local director of health.

(c) All exterior openings shall be screened with sixteen mesh wire screening on frames except where self-closing devices on doors are maintained in service.

(d) Artificial lighting shall be provided on the basis of one forty watt bulb per one hundred square feet of the floor area and shall be reasonably well distributed.

(e) The floors of buildings shall be constructed in such a manner as to avoid dampness. Wooden floors shall be elevated not less than twelve inches above the normal ground level.

(f) No tents shall be used for housing, except when provided with wood platforms and with prior approval by the local director of health.

(g) Adequate lighting shall be provided for all toilets, hallways, main entrances and fire exits.

(h) Premises shall be kept clean and free of litter and rubbish.

(See Reg. 22-17a-3.)

Sec. 19-13-B56. Sleeping quarters for workers

(a) Sleeping quarters shall be in good structural condition and constructed so as to provide shelter to the occupants against the elements and to exclude dampness.

(b) Beds shall be furnished to all employees; a separate bed shall be provided for each person; single beds shall be set at a minimum of three feet apart; double-deck beds shall be set at a minimum of four and one-half feet apart; ceiling height above the top mattress shall be not less than thirty-six inches in rooms used prior to June 7, 1960, for this purpose and not less than forty-two inches in the case of new construction.

(c) If a room in a lodging or boarding house is overcrowded, the local director of health may order the number of persons sleeping or living in such room to be so reduced that there shall not be less than five hundred cubic feet of air to each person over twelve years of age and three hundred cubic feet of air to each child under twelve years of age occupying such room.

(d) Male and female boarders or lodgers shall not be housed in the same building, except that female cooks may be allowed to lodge in the same building with boys if suitable privacy can be arranged as to sleeping quarters and bathing and toilet facilities. This may also apply to camp directors and their families.

(e) Sleeping shall not be permitted in kitchens or eating quarters.

(I) Adequate lockers or storage space shall be provided for clothing and personal effects of lodgers. Regular inspections shall be made of the lockers and storage facilities to keep them clean and free from soiled clothing.

Sec. 19-13-B57. Bedding in sleeping quarters for workers

(a) Blankets, sheets, pillow cases, pillows and mattresses or mattress bags shall be provided.

(b) All bedding shall be maintained in a clean and sanitary condition and its condition shall be the responsibility of the management. The sheets and pillow cases shall be laundered at least once a week. Blankets shall be washed at sufficiently frequent intervals to insure cleanliness and, in any case, shall be washed at least every three months. Blankets shall be washed before use by a new worker. When mattresses, mattress bags or pillows become dirty or discolored, they shall be discarded or cleaned. If mattress bags are provided, the bags shall be washed at

least every six months and, in any case, before use by a new worker. The mattress filling shall be changed at the time the bags are washed.

(c) Regular inspections of beds and bedding shall be made for vermin and periodic extermination service provided when necessary.

Sec. 19-13-B58. Kitchen and mess hall or dining room for workers

(a) The kitchen and dining room shall be separated from sleeping quarters and toilet rooms. Walls, floors and ceilings shall be in good repair and so constructed as to permit reasonable ease in cleaning. Walls and ceilings shall be painted in light color. The kitchen and dining room shall be adequately equipped for the preparation and serving of food to the number of people involved.

(b) Adequate refrigeration shall be provided and all refrigerators or ice chests shall be maintained in good order and kept in a clean condition. Refrigeration temperatures shall be kept below 45°F. Adequate, ventilated and verminproof food storage space shall be provided. All food shall be stored at least eighteen inches above the floor.

(c) Dishes, knives, forks and other utensils shall be of nontarnishable materials and shall be kept in good condition. Cracked and chipped dishes shall be discarded. All eating and cooking utensils shall be protected from flies, vermin and dust.

(d) A scullery sink or other satisfactory means, together with ample facilities for furnishing hot water, shall be provided for washing kitchen utensils and dishes. (A three compartment sink is recommended.) All glasses, cups, knives, forks, spoons and dishes shall be thoroughly washed after each use by cleaning with hot water and soap and sanitized by a bactericidal process approved by the director of health.* All multi-use utensils used in the preparation or serving of food and drink shall be thoroughly cleaned and effectively subjected to an approved bactericidal process immediately following the day's operation. After cleansing, all equipment shall be stored in such a manner as not to become contaminated before being used.

(e) Stoves, work tables, shelves and accessories in adequate number shall be provided. Ample dish and food storage space shall be provided for the number of people to be accommodated.

(f) Tables, chairs or benches, sinks, counters, preparation and/or serving tables, cabinets and shelves shall be kept clean. Cutting boards shall be provided. Dining tables and counters shall be covered with solid top nonabsorbent, easily washed material.

(g) All windows, doors and exterior openings in kitchen and eating quarters shall be completely screened with sixteen mesh wire screening frames. All doors shall be selfclosing.

(h) Provision shall be made for collecting garbage in an adequate number of covered fly-tight metal containers and disposing of the same at least every two days. Disposal may be by burial not nearer than one hundred feet from the kitchen or water supply, or by hauling away and otherwise disposing of the same so as not to create a nuisance. All garbage cans shall be thoroughly cleaned after each time they are emptied. Garbage cans shall be stored either on concrete platforms, at least eight inches above ground and with footings around the entire edge at least eighteen inches deep or on platforms eighteen inches above the ground and open underneath for raking.

(Effective April 11, 1973)

* See Appendix to regulation.

APPENDIX**Approved Sanitizing Processes**

When manual dishwashing is used, utensils after thorough washing and rinsing, clean to sight and touch, shall be sanitized by:

(a) Immersion for at least one minute in clean, hot water at a temperature of at least 170°F. An approved thermometer shall be available convenient to the vat. The pouring of scalding water over the washed utensils shall not be accepted as satisfactory compliance; or

(b) Immersion for at least one minute in a * * * sanitizing solution containing: (1) At least 50 * * * mg/l of available chlorine * * * at a temperature of not less than 75°F. The bath should be made up to a strength of 100 * * * mg/l or more of * * * available chlorine and shall not be used after its strength has been reduced to 50 * * * mg/l; or (2) at least 12.5 mg/l of available iodine in a solution having a pH value not higher than 5.0 and a temperature of not less than 75°F.; or (3) any other chemical sanitizing agent which has been demonstrated to the satisfaction of the director of health to be effective and nontoxic under use conditions, and for which a suitable field test is available. Such sanitizing agents, in use solutions, shall provide the equivalent bactericidal effect of a solution containing at least 50 mg/l of available chlorine at a temperature not less than 75°F.

(Effective October 22, 1963)

(See Reg. 22-17a-7.)

Sec. 19-13-B59. Food for workers

(a) Food handlers shall be persons in good health, free from open sores and lesions on the body and free from communicable diseases. (See section 19-13-B42 (q), relating to employment of persons with communicable diseases.) All employees shall wear clean outer garments and shall keep their hands clean at all times while engaged in handling food, drink, utensils or equipment. Employees shall not expectorate in rooms in which food is prepared. No employee shall resume work after using the toilet room without first washing his hands.

(See Reg. 19-13-A23.)

(b) All food and drink shall be clean, wholesome, free from spoilage and so prepared as to be safe for human consumption. It shall be protected from dust, flies and vermin at all times. All oysters, clams and mussels shall be from approved sources.

(c) Lunches for consumption in the fields shall be put up in securely wrapped waxed paper or other nonabsorbent material. Readily perishable food shall be kept at a temperature at or below 45°F. until served.

(d) Milk shall be handled and served in a sanitary manner and not exposed to dust, flies or vermin. Milk shall be kept under satisfactory refrigeration. Only pasteurized or canned milk shall be served.

(e) All meat served shall be from an inspected source.

(f) Sugar shall be stored in a covered container and shall be placed in covered dispensers.

(Effective October 22, 1963)

(See Reg. 22-17a-8.)

Sec. 19-13-B60. Water supply for workers' quarters

(a) The supply shall be adequate to furnish at least thirty gallons of water per day per person. Adequate storage to handle peak loads shall be provided. Running water under pressure shall be provided.

(b) Any water supply used or rendered available for drinking and for other personal or domestic purposes shall be obtained from a public water supply or from a properly protected and located ground water supply approved by the local director of health.

(c) All wells, whether drilled and cased, dug or driven, shall be so located, constructed and covered, and the pump so attached, as to prevent pollution of the well. All surface and near surface water shall be excluded from the well, preferably by a concrete platform curb. Provision shall be made for proper drainage of pump pits.

(d) If ground water supply is used, the source shall be not nearer than one hundred feet to privy vaults, cesspools or other sewage disposal systems.

(e) Springs shall not be considered satisfactory unless amply protected against pollution and so constructed as to meet the requirements of the local director of health.

(f) The bacteriological quality of the water shall be determined by analysis of samples in those cases where the supply has been out of use or where it otherwise appears necessary.

(g) No common drinking cups shall be permitted. Individual paper drinking cups or approved type drinking fountains, conveniently located, shall be provided.

(h) No pipe connections shall be made between a potable water supply and any other water supply.

(See Reg. 22-17a-9.)

Sec. 19-13-B61. Sewage disposal for workers' quarters

(a) Where no municipal disposal system is available, all kitchen, lavatory, toilet, bathhouse and laundry wastes shall be disposed of by running through covered drains to a sub-surface disposal system or otherwise disposed of in a manner approved by the local director of health. In unfavorable seepage soil it may be desirable to install separate systems for toilet wastes and other wastes.

(b) Toilet facilities shall be provided on the basis of one seat for each ten women, or one seat plus one standing urinal or three feet of trough type urinal for each twenty men. If privies are used, standards shall be not less than those required under section 19-13-B53. Toilet seats shall be of the open front type.

(See Reg. 22-17a-10.)

Sec. 19-13-B62. Lavatory, bathing and laundry facilities for workers' quarters

(a) Adequate handwashing, bathing and laundry facilities, with running water of approved quality, shall be provided. Hot water shall be available in adequate quantities.

(b) There shall be provided one lavatory or its equivalent for each fifteen persons or fraction thereof.

(c) Showers shall be provided in these ratios: One shower head for one to ten persons, except that, in case of quarters for less than five workers, a bathtub may be used in place of showers with the approval of the local director of health; two shower heads for eleven to forty persons, one shower head for each twenty persons or fraction thereof where over forty persons are housed.

(d) There shall be provided one laundry tub for each twenty-five men or one laundry tub for each twenty women, plus adequate facilities for clothes drying.

(e) Shower room floors shall be scrubbed daily with soap and hot water. Swabbing with a chlorine solution having a strength of not less than 0.5% available chlorine is an additional safeguard.

(f) Mats, cloth or other absorbent materials shall not be placed on bathroom floors or shower room floors.

(g) Duck boards shall not be used in shower rooms.

(h) Each shower room or bathroom shall be adequately ventilated by freely opening windows that shall be screened with sixteen mesh wire screen.

(i) Use of common towels shall not be permitted.

(See Reg. 22-17a-11.)

Sec. 19-13-B63. Refuse disposal for workers' quarters

Metal cans with tight fitting covers or other method of storage approved by the local director of health shall be provided to store rubbish pending collection and final disposal. Refuse shall be hauled away as necessary and disposed of so as not to create a nuisance. Rubbish cans shall be stored in the manner outlined for storage of garbage cans.

(See Regs. 19-13-B58(n), 22-17a-12.)

SHELLFISH

Secs. 19-13-B64—19-13-B70.

Repealed October 28, 2005.

Sec. 19-13-B71. Sewage disposal from boats near shellfish areas

The discharge of human waste from any boat into the waters directly over or adjacent to areas on which shellfish are being produced for market is prohibited.

Sec. 19-13-B72. Contamination of shellfish prohibited

Shellfish held in wet or dry storage shall be so kept at all times that they will not become contaminated.

Secs. 19-13-B73—19-13-B77.

Repealed, October 28, 2005.

SANITATION OF SLAUGHTERHOUSES

Sec. 19-13-B78. Slaughterhouses regulated

Every slaughterhouse or place where the business of slaughtering beef, poultry or swine, or preparing the same for market, is carried on, and the implements, utensils and appliances used therein, shall at all times be kept in a clean and sanitary condition.

(a) **Hogs prohibited.** No hogs shall be kept in connection with or within five hundred feet of such slaughterhouse.

(b) **Disposal of offal and refuse.** All offal, refuse and waste material shall be disposed of in a sanitary manner within twenty-four hours after slaughtering.

(c) **Water supply.** An adequate water supply, both hot and cold, shall be provided and arranged so as to permit a thorough washing of walls, floors and equipment of the slaughterhouse.

(d) **Disposal of fat and bones.** All bones and fat shall be placed in covered containers and removed from the slaughtering room within twenty-four hours.

(e) **Hides and pelts.** Hides or pelts shall not be stored on the floor of any room used for slaughtering, storing or preparing meats or meat food products.

Sec. 19-13-B79. Construction and sanitary requirements

(a) **Construction of rooms and floors.** (1) The floors shall be of brick, concrete or other hard impervious material and properly sloped to outlets covered with

removable grating, the bars of which shall not be more than one-half inch apart; (2) the walls shall be covered or made to a height of seven feet with concrete at least three inches thick or other approved impervious material; (3) all rooms shall be properly ventilated and well lighted, (4) properly ventilated and refrigerated cooling and storage rooms shall be provided and kept in a clean and sanitary condition. They shall be screened so as to prevent the entrance of flies and insects.

(b) **Sterilization of apparatus.** All apparatus, containers and implements used shall be thoroughly cleansed daily after using, with boiling water, live steam or other efficient sterilizing agent subject to the approval of the director of health.

(c) **Meat to be kept off floor.** Meat shall be placed on racks, hooks, tables or in suitable containers and shall never be placed on the floor

(d) **Sterilization of offal and flesh.** All offal or flesh fed to swine shall be sterilized by cooking before feeding.

(See Reg. § 22-320f-1 et seq.)

(e) **Sanitation of yards.** The yards, fences, pens, chutes and alleys on the premises, whether they are used or not, shall be maintained in a sanitary condition.

(f) **Disposal of wastes.** Proper facilities shall be provided for the collection and disposal of all liquid wastes, including blood, floor washings and other materials.

(g) **Toilets to be provided.** Toilets shall be provided for the use of the employees, the type and location to be approved by the director of health.

PUBLIC WATER SUPPLIES

Sec. 19-13-B80. Chemical substances in public water supplies

No chemical substances other than those used on September 1, 1964, with the approval of the commissioner of health shall be added to public water supplies designed for human consumption whether in the course of filtration, for control of plant or animal life, or for any other purpose without prior approval by the commissioner of health. Before installation of equipment for such addition, plans and specifications shall be submitted to and approved by the commissioner of health. These plans shall provide procedures necessary for the satisfactory operation of the installation, including the proper testing of the water for chemical content, which procedures shall be followed by any person, firm, corporation or municipality having jurisdiction over the supply.

(Effective September 1, 1964)

Mass Gatherings

Sec. 19-13-B81. Application

The provisions of sections 19-13-B81 to 19-13-B96, inclusive, shall be applicable to any mass gathering.

(Effective December 7, 1971)

Sec. 19-13-B82. Definitions

As used in sections 19-13-B81 to 19-13-B96, inclusive:

(1) "Mass gathering" means an assembly which is attended by three thousand or more persons at a stated location for a period of eighteen or more consecutive hours; (2) "drinking water" means water of a safe sanitary quality approved by the commissioner of health; (3) "sewage" means all human excretions and liquid domestic wastes including toilet, lavatory, shower, dishwashing or laundry, and

other water-carried wastes from any other fixture; (4) “solid wastes” means all putrescible and nonputrescible solid wastes, including garbage, refuse and ashes.

(Effective December 7, 1971)

Sec. 19-13-B83. Prerequisite

Water, toilet, handwashing and shower facilities shall be constructed and operational not later than seven days before the first day of the mass gathering. Plans necessary to show full compliance with the requirements of sections 19-13-B81 to 19-13-B96 shall be submitted to the local director of health 30 days in advance of such assembly. The plans shall provide for adequate and satisfactory water supply and sewage facilities, adequate drainage, adequate toilet, handwashing and shower facilities, adequate sleeping areas and facilities, adequate facilities for proper food storage, preparation and service, insect and noxious weed control, adequate refuse storage, collection and disposal facilities, adequate first aid, nursing and medical facilities, and such other matters as may be appropriate for security of life or health.

(Effective December 7, 1971)

Sec. 19-13-B84. Drainage

Sleeping areas and other places where occupants congregate shall be adequately drained.

(Effective December 7, 1971)

Sec. 19-13-B85. Interior roads

A mass gathering site shall be provided with a network of interior roads to be kept clear at all times for service and emergency vehicles, as well as to make the sanitary, food and medical facilities available to the occupants.

(Effective December 7, 1971)

Sec. 19-13-B86. Illumination

A mass gathering shall be provided with illumination sufficient to light the entire area of the assembly at the rate of at least five foot candles, but not to shine unreasonably beyond the boundaries of the location of the assembly, and with adequate light for toilet areas, service areas, roads and walkways.

(Effective December 7, 1971)

Sec. 19-13-B87. Medical services

Physicians licensed and currently registered in Connecticut shall be available at all times on the site in a convenient location in the proportion of one physician to each one thousand persons or fraction thereof attending to administer or supervise the administration of emergency care. They shall be assisted by nurses licensed or registered currently in Connecticut in such numbers as to provide at least one such nurse for every fifteen hundred persons. An enclosed covered structure where treatment may be rendered, containing a separately enclosed treatment room for each physician, shall be provided. Records shall be maintained of all prescription drugs administered and all such drugs shall be in the custody of a Connecticut licensed physician or pharmacist. Records of persons so treated shall specify the name and address of the patient, tentative diagnosis and other pertinent information. There shall be adequate provisions for emergency ambulance service, and at least one emergency ambulance available for use at all times. There shall be on file a memorandum of understanding with a nearby general hospital concerning the provision of hospital care, and the management of the mass gathering shall be responsible

for payment for such care for illnesses or injuries occurring on the premises. There shall be telephone service available to the medical director in the first aid area.

(Effective December 7, 1971)

Sec. 19-13-B88. Drinking water

The drinking water shall be from a public water supply approved by the state commissioner of health or from a source which conforms with the requirements of sections 19-13-B51a to 19-13-B51l, inclusive, shall be of a safe, sanitary quality, adequate in pressure and quantity, sufficient to provide drinking water for the maximum number of people to be assembled at the rate of at least one gallon per person per day, and shall be readily available to occupants of the mass gathering. Only drinking water shall be available for drinking or other domestic use.

(Effective December 7, 1971)

Sec. 19-13-B89. Drinking fountains

Approved drinking fountains as prescribed in section 19-13-B35 shall be located within a distance of not more than five hundred feet of any sleeping spot or other area where occupants congregate within such tract and there shall be one drinking fountain for each one hundred persons.

(Effective December 7, 1971)

Sec. 19-13-B90. Toilet facilities, sewage disposal

Fly-tight privies or water-flushed toilets with a system of sewage disposal which conforms with the requirements of sections 19-13-B20a to 19-13-B20r, inclusive, shall be provided and shall be maintained in a clean and sanitary condition. Any privy or sewage disposal system shall be so constructed and located as not to pollute any source of drinking water or watercourse or to create a public health nuisance.

(Effective December 7, 1971)

Sec. 19-13-B91. Toilet facilities, location

Separate toilets for men and women shall be provided, with at least one toilet seat for every two hundred females and at least one toilet seat for every three hundred males. No sleeping spot shall be located at a distance greater than five hundred feet from both men's and women's toilets. The location of all toilets shall be plainly indicated by signs.

(Effective December 7, 1971)

Sec. 19-13-B92. Handwashing facilities

Handwashing facilities, with running water under pressure and soap and paper towels or other approved hand drying method, shall be available near each group of toilets and near each food service area. At least one handwashing facility shall be provided with each toilet.

(Effective December 7, 1971)

Sec. 19-13-B93. Bathing facilities

Suitable and adequate shower bathing facilities separate for men and women shall be provided. There shall be at least one shower for each three hundred persons with hot and cold water and adequate subsurface sewage disposal in accordance with section 19-13-B20a to 19-13-B20r, inclusive.

(Effective December 7, 1971)

Sec. 19-13-B94. Dispensing food or beverages

Facilities for dispensing foods or beverages shall meet the requirements of sections 19-13-B42, 19-13-B48 and 19-13-B49 and shall be adequate to serve the maximum number of persons.

(Effective December 7, 1971)

Sec. 19-13-B95. Depositories

Adequate and sanitary facilities shall be provided and maintained for the storage, collection, and disposal of solid wastes and shall comply with sections 19-13-B21 and 19-13-B24a. Sufficient depositories with covers shall be provided throughout the area with at least daily collection.

(Effective December 7, 1971)

Sec. 19-13-B96. Noxious weeds

The entire area to be used for the mass gathering shall be cleared of all poison ivy and other noxious weeds at least seven days in advance of the mass gathering.

(Effective December 7, 1971)

Sec. 19-13-B97.

Repealed, December 27, 2005.

See § 19a-2a-29.

Water Company Land**Sec. 19-13-B98.**

Repealed, February 6, 1980.

Control of Fumigation**Sec. 19-13-B99. Control of fumigation**

(a) No person, firm or corporation, or the agent, employee or servant thereof, shall use or cause to be used, any substance for the purpose of fumigating any building, vessel, special room, vault, tank or enclosed space in the state of Connecticut without compliance with this section. This section shall not apply to fumigation of greenhouses or mushroom houses, horticultural or farm fumigation or the control of burrowing animals outside of buildings. Substances commonly known as insecticides and disinfectants, which are essentially destructive in the solid or liquid phase, are excluded from this section. A person, firm or corporation or the agent, employee or servant conducting fumigation is hereafter designated as a fumigator.

(b) A fumigator shall be licensed by the state department of environmental protection and shall be qualified by special training and experience to conduct fumigations in such manner as to be effective and to protect life and property. He shall be able to read and understand regulations governing fumigation operations, shall know the basic facts concerning the fumigant he is using, shall have general knowledge of all fumigants commonly used as pest control and shall know the hazards involved and the safety precautions and first aid measures necessary to safeguard human life. He shall have proper equipment to carry out fumigations and necessary safety precautions.

(c) No person shall conduct fumigation in any town, city or borough without a local permit or license if such permit or license is required by local ordinance, or otherwise without registration of his qualifications with the local director of health

of the town, city or borough and submission of information as to qualifications. No person found by the local director of health to be unqualified for the purpose of conducting fumigation shall conduct any fumigation.

(d) Written notice of fumigation shall be served upon the owner of the building to be fumigated or his authorized agent and written or verbal notice shall be served upon all occupants of the building. Written notice shall also be served upon the local director of health and officials in charge of the local fire and police departments. All notifications shall be served at least twenty-four hours in advance of fumigation unless this required time is reduced by direction of the local director of health. If there is no organized local fire or police department, notification shall be made upon the first selectman of the town or the warden of the borough, as the case may be.

(e) The fumigator shall take steps to effect removal, from the premises to be fumigated or adjacent buildings which may be affected by fumigation, of all food, drink or drugs which may absorb any poisonous substances used in the process of fumigation.

(f) If any part of a building, other than a special room or vault especially designed for this purpose and having proper ventilation, is to be fumigated, the entire building shall be vacated during the fumigation and ventilation periods. All persons occupying or living in premises to be fumigated shall vacate such premises upon request of the fumigator. If anyone fails to comply with such a request, the director of health may declare the premises unfit for human habitation and may issue necessary orders for vacating of the premises, if in his opinion fumigation is necessary to eliminate insanitary conditions.

(g) If inspection shows the possibility of gas gaining entrance to separate adjacent buildings, the fumigator shall warn in advance the occupants of such separate adjacent buildings and take any steps necessary to safeguard the lives and health of all persons occupying such buildings.

(h) All crevices, cracks or openings in the building or portion thereof to be fumigated, except the exit, shall be effectively sealed before fumigation material is distributed. All workers shall be accounted for before the final exit is closed and sealed.

(i) Warning signs, printed in red with headline letters at least two inches in height, shall be placed at all exits of the premises and kept there during fumigation and ventilation. They shall comply with the pertinent United States Department of Labor Occupational Safety and Health Standards.

(j) During periods of fumigation and ventilation the fumigator shall employ locks or barricades to prevent unauthorized entrance and shall provide for one or more watchmen who shall remain on duty until such time as the premises have been declared by the fumigator to be safe for human occupancy.

(k) Persons conducting fumigation shall wear masks of a suitable type while in the enclosed space during and after liberation of gas and until the space after ventilation is declared safe by the fumigator. The fumigator shall provide an extra canister for the mask at each fumigating job and shall keep an accurate record of the length of time during which the gas canister has been used in order that it may be replaced as required. In handling sulphuric acid, cyanide or other material likely to be injurious, rubber gloves shall be used. Employees of the fumigator shall comply with pertinent United States Department of Labor Occupational Safety and Health Standards.

(l) A minimum of twelve hours shall be required for ventilation, except for rooms, vaults and chambers equipped with a special exhaust system. During ventilation (1)

all windows, doors and other means of ventilation shall be kept open; (2) all drawers, closets and similar enclosures shall be kept open; (3) all mattresses and bedding shall be taken from beds and thoroughly aired; (4) the temperature of living quarters shall be elevated to a minimum of 60°F.

(m) Prior to allowing any other persons to enter, the fumigator shall, at the conclusion of ventilation of the premises, inspect and make appropriate tests of the interior of the building and certify that it is safe for persons to enter without special protection.

(n) Proper arrangements shall be made and carried out for the disposal of residue fumigation material.

(o) Special rooms, tanks, vaults or other enclosed spaces in which articles are fumigated shall meet with the approval of the local director of health in regard to the construction and location of premises.

(Effective January 2, 1975)

Building Conversion

Sec. 19-13-B100.

Repealed, August 3, 1998.

Sec. 19-13-B100a. Building conversions/changes in use, building additions, garages/accessory structures, swimming pools, sewage disposal area preservation

(a) **Definitions.** As used in this section:

(1) “Accessory structure” means a permanent non-habitable structure which is not served by a water supply and is used incidental to residential or non-residential buildings. Accessory structures include, but are not limited to, detached garages, open decks, tool and lawn equipment storage sheds, gazebos, and barns.

(2) “Building conversion” means the act of winterizing a seasonal use building into year round use by providing one or more of the following: (A) a positive heating supply to the converted area; or, (B) a potable water supply which is protected from freezing; or, (C) energy conservation in the form of insulation to protect from heat loss.

(3) “Change in use” means any structural, mechanical or physical change to a building which allows the occupancy to increase; or the activities within the building to expand or alter such that, when the building is fully utilized, the design flow or required effective leaching area will increase.

(4) “Code-complying area” means an area on a property where a subsurface sewage disposal system can be installed which meets all requirements of Section 19-13-B103 of the Regulations of Connecticut State Agencies, and the Technical Standards except for the one hundred percent reserve leaching area referred to in Section VIII A of the Technical Standards.

(5) “Design flow” means the anticipated daily discharge from a building as determined in accordance with Sections IV and VIII F of the Technical Standards.

(6) “Potential repair area” means an area on a property which could be utilized to repair or replace an existing or failed septic system and includes areas on the property where exceptions to Section 19-13-B103 of the Regulations of Connecticut State Agencies could be granted by the local director of health or the Commissioner of Public Health but does not include areas beyond those necessary for a system repair and areas of exposed ledgerrock.

(7) “Technical Standards” means those standards established by the Commissioner of Public Health in the most recent revision of the publication entitled “Technical Standards for Subsurface Sewage Disposal Systems” prepared pursuant to Section 19-13-B103d(d) of the Regulations of Connecticut State Agencies. These standards can be obtained from the Department of Public Health, 410 Capitol Avenue, MS #51SEW, P.O. Box 340308, Hartford, CT. 06134-0308, or by calling (860) 509-7296.

(b) **Building conversion, change in use.** If public sewers are not available, no building or part thereof shall be altered so as to enable its continuous occupancy by performing any building conversion, nor shall there be a change in use unless the local director of health has determined that after the conversion or change in use, a code-complying area exists on the lot for installation of a subsurface sewage disposal system. The determination by the local director of health of whether a code-complying area exists on the property shall be based upon analysis of existing soil data. If soil data is not available, the property owner shall perform soil testing. The property owner or the owner’s authorized agent shall submit design plans or a sketch to demonstrate how the property contains a code-complying area that can accommodate a sewage disposal system. The local director of health may require expansion of the existing sewage disposal system or installation of a new sewage disposal system at the time of the change in use for those properties whenever the proposed change in use results in a more than 50% increase in the design flow.

(c) **Building additions.** If public sewers are not available, no addition to any building shall be permitted unless the local director of health has determined that after the building addition a code-complying area exists on the lot for the installation of a subsurface sewage disposal system. Once a code-complying area is identified, portions of the property outside this designated area may be utilized for further development of the property. This determination by the local director of health shall be based upon analysis of existing soil data to determine if a code-complying area exists. If soil data is not available, the property owner shall perform soil testing. The property owner or the owner’s authorized agent shall submit design plans or a sketch to demonstrate how the property contains a code-complying area that can accommodate a sewage disposal system. If the applicant submits soil test data, design plans or a sketch and is unable to demonstrate a code-complying area, the building addition shall be permitted, provided:

(1) The size of the replacement system shown on design plans or sketch provides a minimum of 50% of the required effective leaching area per the Technical Standards,

(2) The replacement system shown on the plans or sketch provides a minimum of 50% of the required Minimum Leaching System Spread (MLSS) per the Technical Standards,

(3) The proposed design does not require an exception to Section 19-13-B103d(a) (3) of the Regulations of Connecticut State Agencies, regarding separation distances to wells,

(4) The addition does not reduce the potential repair area, and

(5) The building addition does not increase the design flow of the building.

The local director of health may require expansion of the existing sewage disposal system or installation of a new sewage disposal system at the time of building addition whenever the proposed addition results in a more than 50% increase in the design flow. The separation distance from an addition to any part of the existing sewage disposal system shall comply with Table 1 in Section II of the Technical Standards.

(d) **Attached or detached garages, accessory structures, below or above ground pools.** If public sewers are not available, no attached garage, detached garage, accessory structure, below or above ground pool shall be permitted unless the local director of health has determined that after construction of the attached garage, detached garage, accessory structure, below or above ground pool, a code-complying area exists on the lot for installation of a subsurface sewage disposal system. This determination by the local director of health shall be based upon analysis of existing soil data. If soil data is not available, the property owner shall perform soil testing. The property owner or the owner's authorized agent shall submit design plans or a sketch to demonstrate how the property contains a code-complying area that can accommodate a sewage disposal system. If the applicant submits soil test data, design plans or a sketch and is unable to demonstrate a code-complying area, the attached or detached garage, below or above ground pool, or accessory structure shall be permitted, provided the structure does not reduce the potential repair area. The separation distance from the attached or detached garage, below or above ground pool, or accessory structure to any part of the existing sewage disposal system shall comply with Table 1 in Section II of the Technical Standards.

(e) **Sewage disposal area preservation.** If public sewers are not available, no lot line shall be relocated or any other activity performed that affects soil characteristics or hydraulic conditions so as to reduce the potential repair area, unless the local director of health has determined that after the lot line relocation or disturbance of soils on the lot a code-complying area exists for the installation of a subsurface sewage disposal system. This determination by the local director of health shall be based upon analysis of existing soil data. If soil data is not available, the property owner shall perform soil testing. The property owner or the owner's authorized agent shall submit design plans or a sketch to demonstrate how the property contains a code-complying area that can accommodate a sewage disposal system. In no case shall a relocated lot line violate Subsection (d) of Section 19-13-B103(d) of the Regulations of Connecticut State Agencies that requires that each subsurface sewage disposal system shall be located on the same lot as the building served.

(f) **Decision by Director of Health.** Any final decision of the local director of health made in regard to this section shall be made in writing and sent to the applicant. Any decision adverse to the applicant or which limits the application shall set forth the facts and conclusions upon which the decision is based. Such written decision shall be deemed equivalent to an order, and may be appealed pursuant to Section 19a-229 of the Connecticut General Statutes.

(Adopted effective August 3, 1998)

Standards for Quality of Public Drinking Water

Sec. 19-13-B101. Testing of water quality in private water supply systems

(a) **Definitions.** As used in this section:

(1) "Approved laboratory" means a laboratory facility issued a certificate of approval by the Department of Public Health pursuant to sections 19-4-1, 19a-36-a25 through 19a-36-a33, and 19a-36-a57 through 19a-36-a63 of the regulations of Connecticut State Agencies.

(2) "Consumer" means any private dwelling, hotel, motel, boarding house, apartment building, store, office building, institution, mechanical or manufacturing establishment or other place of business or industry to which water is supplied by a source of private water supply.

(3) “Department” means the Connecticut Department of Public Health.

(4) “Disinfected” means pathogenic organisms in the water have been deactivated by chemical oxidants such as chlorine or equivalent agents.

(5) “Domestic purposes” means drinking, bathing, washing of clothes and dishes, cooking, and other common household uses.

(6) “Local director of health” means and includes the city, town, borough, or district director of health and any person legally authorized to act for the local director of health.

(7) “Maximum contaminant level (MCL)” means the maximum permissible level of a biological or chemical substance in water for a private water supply system.

(8) “Organic chemicals” means all substances listed in section 19-13-B102(e) (4) of the regulations of Connecticut State Agencies.

(9) “Private water supply system” means any source of private water supply serving a single consumer and less than twenty five (25) persons, and used for drinking or other domestic purposes.

(10) “Qualified individual” means a licensed sanitarian, local director of health, employee of the department, employees of local or state agencies as part of their regulatory or statutory responsibilities, or a person, including an owner or general contractor of a residential construction on which a private water supply system is located, found to be qualified by an approved laboratory to collect water samples from a private water supply system for submission to that laboratory.

(11) “Source of private water supply” means any surface water, spring, well, or underground water source from which water is available by a private water supply system for domestic purposes.

(b) A sample of water collected from a private water supply by a qualified individual shall not be analyzed by the approved laboratory unless it is accompanied by a statement signed by the qualified individual indicating the location of the sample and the address of the private water supply.

(c) MCLS for a private water supply system shall conform to those specified in subdivisions (2), (3) and (4) of subsection (e) of section 19-13-B102 of the regulations of Connecticut State Agencies. The MCL for total coliform bacteria in a private water system is exceeded if the analytical result of the water sample is positive for total coliform bacteria.

(d) The owner of a private water supply system shall have the source of the private water supply sampled directly or sampled from a cold water faucet supplying water for domestic purposes that is located within the building. If water treatment is provided the owner shall have the sample collected prior to any treatment. The sample shall be at a minimum analyzed for total coliform, nitrate, nitrite, sodium, chloride, iron, manganese, hardness, turbidity, pH, sulfate, apparent color and odor. The local director of health shall require a sample to be analyzed for organic chemicals when reasonable grounds exist to suspect that organic chemicals may be present in the private water supply system. For purposes of organic chemical analyses reasonable grounds means any information that is known by the local director of health that indicates that at the time of sampling the particular private water supply system is located on or in proximity to land associated with the past or present production, storage, use, or disposal of organic chemicals or such information as derived from a phase I environmental site assessment. In the event nitrate is at or greater than 10 milligrams per liter and the local director of health has reasonable grounds to suspect such pesticides or herbicides are present the sample shall also be tested for alachlor, atrazine, dicamba, ethylene dibromide (EDB), metolachlor,

simazine and 2,4-D. For purposes of these seven pesticide or herbicide analyses, reasonable grounds includes but is not limited to any information that is known by the director of health at the time of sampling that the particular private water supply is located on or in proximity to land where any of these seven pesticides or herbicides are or were applied on or in proximity to land used for the production, storage, use or disposal of any of these seven pesticides or herbicides or such information as derived from a phase I environmental site assessment. Compliance with this section shall conform to the following conditions as applicable:

(1) The water quality of a newly constructed source of private water supply shall be sampled by a qualified individual and analyzed by an approved laboratory. The private water supply system shall have been disinfected and the system shall not be sampled until all disinfectant has dissipated. The results of such analyses and a statement signed by a qualified individual attesting to the exact address and location of sampling shall be reported by the approved laboratory to the local director of health of the municipality where the property is located within thirty (30) days of the completion of such analyses. Approval by the local director of health that the results of the laboratory analyses comply with MCLS applicable to this section shall be obtained before the private water supply is used for domestic purposes.

(2) If an existing private water supply system is sampled within six (6) months of the sale of the property on which the private water supply system is located, it must be sampled by a qualified individual and analyzed by an approved laboratory. The results of the analyses conducted shall be reported by the approved laboratory to the local director of health of the municipality where the property is located within thirty (30) days of the completion of the analyses. A test of a private water supply system shall not be required by this section as a consequence or condition of sale, exchange, transfer, purchase or rental of the real property on which the private water supply system is located.

(e) This section shall apply to purchase agreements or contracts for the sale of real estate executed on or after December 30, 1996 where title to real estate has not yet passed and to transfers of real estate occurring between December 30, 1996 and the effective date of these regulations where the tests or analyses described in this section were not performed prior to the transfer.

(Effective June 21, 1985; amended, December 30, 1996, December 23, 1997)

Sec. 19-13-B102. Standards for quality of public drinking water

The following standards for the quality of drinking water, minimum treatment methods, and requirements for the design and operation of treatment works and water sources shall be met by all public water systems.

(a) **Definitions.** As used in Section 19-13-B102:

(1) “Action level” means the concentration of lead or copper in water specified in subsection (j)(6)(B) of this section which determines, in some cases, the treatment requirements contained in subsection (j)(6) of this section that a water system is required to complete;

(2) “Active source of supply” means all springs, streams, watercourses, brooks, rivers, lakes, ponds, wells, or underground water from which water is taken on a regular or periodic basis for water supply purposes. A number of wells drawing water from a single aquifer or more than one surface water body or a combination of surface water and groundwater sources connected to a common distribution system may, at the discretion of the department, be considered a single source of supply;

(3) “Annual average” means the arithmetic average of the quarterly averages of four (4) consecutive quarters of monitoring;

(4) “CFR” means Code of Federal Regulations;

(5) “Certified distribution system operator” means an operator who has met the education, experience, and examination requirements specified in section 25-32-11 of the Regulations of Connecticut State Agencies;

(6) “Certified treatment plant operator” means an operator who has met the education, experience, and examination requirements of section 25-32-9 of the Regulations of Connecticut State Agencies;

(7) “Coagulation” means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs;

(8) “Community water system” or “(CWS)” means a public water system that serves at least twenty-five (25) residents;

(9) “Complete conventional treatment” means coagulation, sedimentation or dissolved air flotation, rapid granular filtration, and disinfection unless approved otherwise by the department;

(10) “Compliance period” means a three (3) calendar-year period within a compliance cycle. Each compliance cycle has three (3) 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;

(11) “Compliance cycle” means the nine (9) calendar-year cycle during which public water systems shall monitor. Each compliance cycle consists of three (3) three-year compliance periods. The first calendar year cycle begins January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011 and ends December 31, 2019;

(12) “Composite correction program” or “(CCP)” means a program consisting of two (2) elements: a comprehensive performance evaluation and comprehensive technical assistance;

(13) “Comprehensive performance evaluation” or “(CPE)” means a thorough review and analysis of a treatment plant’s performance-based capabilities and associated administrative, operation and maintenance practices. It is conducted to identify factors that may be adversely impacting a plant’s capability to achieve compliance and emphasizes approaches that can be implemented without significant capital improvements. The comprehensive performance evaluation shall comprise a written report consisting of at least the following components:

(A) Assessment of plant performance;

(B) Evaluation of major unit processes;

(C) Identification and prioritization of performance limiting factors;

(D) Assessment of the applicability of comprehensive technical assistance;

(E) Identification of improvements selected by a public water system to enhance the treatment plant’s capability to achieve compliance; and

(F) A schedule of dates for the implementation of the improvements;

(14) “Comprehensive technical assistance” means a performance improvement phase that is implemented using results from the comprehensive performance evaluation;

(15) “Confluent growth” means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion thereof, in which bacterial colonies are not discrete;

(16) “Consecutive public water system” means a public water system that purchases all of its water from one or more public water systems;

(17) “Consultation” means a telephone call at which the public water system reports to the department the nature of the violation and the department, in turn, determines the action that shall be taken by the public water system;

(18) “Consumer” means one that meets the requirements of section 25-32a of the Connecticut General Statutes;

(19) “Contaminant” means any physical, chemical, biological, or radiological substance or matter in water as in section 1401 Title XIV of the Federal Public Health Service Act;

(20) “Conventional filtration treatment” means a series of processes including coagulation, flocculation, sedimentation or dissolved air flotation, and filtration resulting in substantial particulate removal;

(21) “Corrosion inhibitor” means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials;

(22) “CT” or “CT CALC” means the product of the “residual disinfectant concentration” (C) in milligrams per liter (mg/l) determined before or at the first customer, and the corresponding “disinfectant contact time” (T) in minutes (i.e., “C” X “T”). If a public water system applies disinfectants at more than one point prior to the first customer, it shall determine the CT of each disinfectant sequence before or at the first customer to determine the total percent inactivation;

(23) “Customer” means consumer as defined in section 25-32a of the Connecticut General Statutes;

(24) “Department” means Connecticut Department of Public Health;

(25) “Diatomaceous earth filtration” means a process resulting in substantial particulate removal in which a pre-coat cake of diatomaceous earth filter media is deposited on a support membrane (septum), and while the water is filtered by passing through the cake on the septum, additional filter media known as body feed is continuously added to the feed water to maintain the permeability of the filter cake;

(26) “Direct filtration” means a series of processes including coagulation and filtration, but excluding sedimentation, resulting in substantial particulate removal;

(27) “Disinfectant contact time” (“T” in CT calculations) means the time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration (“C”) is measured;

(A) Where only one “C” is measured (single application point), “T” is the time in minutes that it takes for water to move from the point of disinfectant application to a point before or at which residual disinfectant concentration (“C”) is measured;

(B) Where more than one “C”, is measured (multiple application points), “T” is:

(i) for the first measurement of “C”, the time in minutes that it takes for water to move from the first point of disinfectant application to a point before or at the point where the first “C” is measured; and

(ii) for subsequent measurements of “C”, the time in minutes that it takes for water to move from the previous “C” measurement point to the “C” measurement point for which the subsequent “T” is being calculated;

(C) Disinfectant contact time in pipelines shall be calculated by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe (plug flow); and

(D) Disinfectant contact time within mixing basins, clearwells, and storage reservoirs shall be determined by tracer studies or an equivalent demonstration;

(28) “Disinfection” means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents;

(29) “Disinfection profile” means a summary of daily giardia lamblia inactivation through the treatment plant;

(30) “Domestic or other non-distribution system plumbing problem” means a coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which the coliform-positive sample was taken;

(31) “EC medium/mug tests” means analytical tests for waterborne bacteria as specified in 40 CFR 141.21(f);

(32) “Effective corrosion inhibitor residual” means a concentration sufficient to form a passivating film on the interior walls of a pipe;

(33) “End of distribution system” means the last service connection on a dead-end water main;

(34) “Enhanced coagulation” means the addition of sufficient coagulant for improved removal of disinfection byproduct precursors by conventional filtration treatment;

(35) “Enhanced softening” means the improved removal of disinfection byproduct precursors by precipitative softening;

(36) “EPA” means the United States Environmental Protection Agency;

(37) “Filter profile” means a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed;

(38) “Filtration” means a process for removing particulate matter from water by passage through porous media;

(39) “First draw sample” means a one-liter sample of tap water, collected in accordance with subsection(e)(8)(B)(ii) of this section, that has been standing in plumbing pipes at least six (6) hours and is collected without flushing the tap;

(40) “Flocculation” means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means;

(41) “GAC10” means granular activated carbon filter beds with an empty-bed contact time of 10 minutes based on average daily flow and a carbon reactivation frequency of every 180 days;

(42) “Groundwater under the direct influence of surface water” or “(GWUDI)” means any water beneath the surface of the ground with either 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. Direct influence shall be determined for individual sources in accordance with criteria established by the department. The department determination of direct influence may be based on site-specific measurements of water quality and/or documentation of well construction characteristics and geology with field evaluation according to “Department of Health Services criteria-determination of groundwater under the direct influence of surface water”;

(43) “Haloacetic acid five” or “(HAA5)” means the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to two (2) significant figures;

(44) “Initial compliance period” means the first full three-year compliance period which begins at least eighteen (18) months after promulgation. Initial compliance period runs from January 1, 1993 to December 31, 1995;

(45) “Large water system” means a water system that serves more than fifty thousand (50,000) persons;

(46) “Lead service line” means a service line made of lead that connects the water main to a building inlet and any lead pigtail, gooseneck or other fitting connected to such lead line;

(47) “Legionella” means a genus of bacteria, some species of which have caused a type of pneumonia called legionnaires’ disease;

(48) “Local director of health” means a city, town, borough, or district director of health or his authorized agent;

(49) “mg/L” means milligrams per liter;

(50) “Maximum contaminant level” or “(MCL)” means the maximum permissible level of a contaminant in water that is delivered to any consumer of a public water system;

(51) “Maximum contaminant level goal” or “MCLG” means the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur; and which allows an adequate margin of safety. Maximum contaminant level goals are non-enforceable health goals;

(52) “Maximum residual disinfectant level” or “(MRDL)” means a level of a disinfectant added for water treatment that may not be exceeded at the consumer’s tap without an unacceptable possibility of adverse health effects. MRDL is enforceable in the same manner as maximum contaminant level;

(53) “Maximum residual disinfectant level goal” or “(MRDLG)” means the maximum level of a disinfectant added for water treatment at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety. MRDLG is a non-enforceable health goal and does not reflect the benefit of the addition of the chemical for control of waterborne microbial contaminants;

(54) “Medium-size water system” means a water system that serves greater than three thousand three hundred (3,300) and less than or equal to fifty thousand (50,000) persons;

(55) “Method detection limit” or “(MDL)” means the minimum concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the true value is greater than zero (0);

(56) “Near the first service connection” means at one of the twenty percent (20%) of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system;

(57) “Non-community water system” means a public water system that serves at least twenty-five (25) persons at least sixty (60) days out of the year and is not a community water system;

(58) “Non-transient non-community water system” or “(NTNC)” means a public water system that is not a community system and that regularly serves at least twenty-five (25) of the same persons over six (6) months per year;

(59) “Notification level” means the level of a contaminant that if exceeded shall require public notification by a public water system to its consumers;

(60) “Optimal corrosion control treatment” means the corrosion control treatment that minimizes the lead and copper concentrations at users’ taps while ensuring that the treatment does not cause the water system to violate any drinking water statutes or regulations;

(61) “Other unregulated contaminants” means contaminants that meet or exceed the department’s action level or contaminant level for which the maximum contaminant goal has been proposed for drinking water by EPA;

(62) “Physical parameters” means color, turbidity, pH and odor;

(63) “Point of disinfectant application” is the point where the disinfectant is applied and water downstream of that point is not subject to recontamination by surface water;

(64) “Point of entry” means a location on an active source of supply that is after any treatment and before entrance to the distribution system;

(65) “Public water system” or “System” means any water company supplying water to fifteen (15) or more consumers or twenty-five (25) or more persons, based on the “Design Population” as defined in section 16-262m-8(a)(3) of the Regulations of Connecticut State Agencies, jointly administered by the department and the Department of Public Utility Control, daily at least sixty days (60) of the year. A system is not a public water system if it meets all of the following conditions:

(A) consists only of distribution and storage facilities;

(B) does not have any treatment facilities, other than those for non-potable use;

(C) obtains all of its water from, but is not owned or operated by, a public water system;

(D) does not separately bill the consumers for water use or consumption; and

(E) is not a carrier which conveys passengers in interstate commerce;

(66) “Practical quantification level” or “(PQL)” means the lowest concentration that can be reliably measured within specific limits of precision and accuracy during routine laboratory operating conditions;

(67) “Repeat compliance period” means any subsequent compliance period after the initial compliance period;

(68) “Repeat sample” means a sample that is collected as a result of a total coliform-positive routine sample;

(69) “Residual disinfectant concentration” (“C” in CT calculations) means the concentration of disinfectant measured in mg/L in a representative sample of water;

(70) “Routine sample” means a sample that is collected at a location and frequency as specified in the approved sample siting plan;

(71) “Sanitarian” means a person who is trained in environmental health and who is qualified to carry out educational and investigational duties in the fields of environmental health such as investigation of air, water, sewage, foodstuffs, housing and refuse by observing, sampling, testing and reporting; and who is licensed pursuant to section 20-361 of the Connecticut General Statutes;

(72) “Sanitary survey” means an onsite inspection of the water source, treatment, distribution system, finished water storage, pumping facilities and controls, monitoring and reporting data, system management and operation, and operator compliance with department requirements. Components of the sanitary survey may be completed as part of a staged or phased review process by the department within the established frequency;

(73) “Second compliance period” means the second full three-year compliance period in the first compliance cycle. Second compliance period runs from January 1, 1996 to December 31, 1998;

(74) “Sedimentation” means a process for removal of solids before filtration by gravity or separation;

(75) “Self assessment” means an assessment which shall comprise a written report consisting of at least the following components:

(A) Assessment of filter performance;

(B) Development of a filter profile;

(C) Identification and prioritization of factors limiting filter performance;

(D) Assessment of the applicability of improvements;

(E) Identification of improvements selected by a public water system to enhance filtration and achieve compliance; and

(F) A schedule of dates for the implementation of the improvements;

(76) “Service line sample” means a one (1) liter sample of water, collected in accordance with subsection (e)(8)(B)(iii) of this section, that has been standing for at least six (6) hours in a service line;

(77) “Significant deficiency” means a violation of section 19-13-B102(j)(2) of the Regulations of Connecticut State Agencies;

(78) “Single family structure” means a building constructed as a single-family residence that is currently used as either a residence or a place of business;

(79) “Slow sand filtration” means a process involving passage of raw water through a bed of sand at low velocity (generally less than 0.16 gallons per minute per square foot, gpm/sq. ft.) resulting in substantial particulate removal by physical and biological mechanisms;

(80) “Small water system” means a water system that serves three thousand three hundred (3,300) persons or fewer;

(81) “Source water” means raw water before any kind or type of treatment at the source of supply;

(82) “Special purpose sample” means a sample that is taken to determine whether disinfection practices are sufficient following routine maintenance work on the distribution system;

(83) “Surface water” means all water that is open to the atmosphere and subject to surface runoff;

(84) “SUVA” means specific ultraviolet absorption at 254 nanometers (nm), an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample’s ultraviolet absorption at a wavelength of 254 nm (UV254) (in M-1) by its concentration of dissolved organic carbon (DOC) in mg/L;

(85) “System with a single service connection” means a system that supplies drinking water to consumers via a single service line;

(86) “Tier 1 notice” means a notice that is required when a public water system has failed to comply with requirements for any of the following:

(A) The maximum contaminant level (MCL) for total coliforms when fecal coliform or E.coli are present in the water distribution system, or when the public water system fails to test for fecal coliforms or E.coli when any repeat sample tests positive for coliform;

(B) The MCL for nitrate, nitrite, or total nitrate and nitrite, or when the public water system fails to take a confirmation sample within twenty-four (24) hours of the system’s receipt of the first sample showing an exceedance of the nitrate or nitrite MCL;

(C) The maximum residual disinfectant level (MRDL) for chlorine dioxide when one or more samples taken in the distribution system the day following an exceedance

of the MRDL at the entrance of the distribution system exceed the MRDL, or when the public water system does not take the required samples in the distribution system;

(D) The MCL for turbidity as specified in sections 19-13-B102(e)(7)(H)(ii) and 19-13-B102(j)(2)(D) of the Regulations of Connecticut State Agencies, where the department determines after consultation that the violation of the MCL for turbidity combined with other site-specific information indicate that potential pathogens may have passed the point of entry to the water distribution system, or where consultation does not take place within twenty-four (24) hours after the public water system learns of the violation;

(E) The MCL for turbidity as specified in section 19-13-B102(j)(4) of the Regulations of Connecticut State Agencies, where the department determines after consultation that the violation of the MCL for turbidity combined with other site-specific information indicate that potential pathogens may have passed the point of entry to the water distribution system, or where consultation does not take place within twenty-four (24) hours after the public water system learns of the violation;

(F) Occurrence of a waterborne disease outbreak, as defined in section 19-13-B102(a) of the Regulations of Connecticut State Agencies; or

(G) Any chemical listed in sections 19-13-B102(e)(2) to 19-13-B102(e)(4), inclusive of the Regulations of Connecticut State Agencies is found at a level that is determined in writing by the department to have serious adverse effects on human health as a result of short term exposure based on available scientific and epidemiological findings.

(87) “Tier 2 notice” means a notice that is required when a public water system has failed to comply with requirements for any of the following:

(A) The MCL, MRDL, or treatment technique requirements, except where a tier 1 notice is required under section 19-13-B102(a) of the Regulations of Connecticut State Agencies;

(B) Monitoring or testing procedure requirements for total coliforms, nitrate, nitrite, total nitrate and nitrite, or chlorine dioxide, except where a tier 1 notice is required under section 19-13-B102(a) of the Regulations of Connecticut State Agencies; or

(C) The terms and conditions of any variance, consent order, consent agreement or exemption in place.

(88) “Tier 3 notice” means a notice that is required when a public water system has:

(A) Violated a monitoring requirement, except where a tier 1 notice or a tier 2 notice is required under section 19-13-B102(a) of the Regulations of Connecticut State Agencies;

(B) Violated a testing procedure requirement, except where a tier 1 notice or a tier 2 notice is required under section 19-13-B102(a) of the Regulations of Connecticut State Agencies;

(C) Operated under an administrative order, variance, or an exemption;

(D) Failed to provide the notice of the availability of unregulated contaminant monitoring results, as required under 40 CFR 141.207; or

(E) Exceeded the fluoride secondary maximum contaminant level (SMCL), as required under 40 CFR 141.208.

(89) “Too numerous to count” means that the total number of bacterial colonies exceeds two hundred (200) on a forty-seven (47) mm diameter membrane filter used for coliform detection;

(90) “Total organic carbon” or “(TOC)” means total organic carbon in mg/L measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combina-

tions of these oxidants that convert organic carbon to carbon dioxide, rounded to two (2) significant figures;

(91) “Total trihalomethanes” or “(TTHM)” means the sum of the concentrations in milligrams per liter of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform) and trichloromethane (chloroform) rounded, to two (2) significant figures;

(92) “Transient non-community water system” or “(TNC)” means a noncommunity water system that does not meet the definition of a non-transient noncommunity water system;

(93) “Uncovered finished water clearwell, tank or basin” means a container that stores water shall undergo no further treatment except disinfection and is open to the atmosphere.

(94) “Virus” means a microorganism of fecal origin which is infectious to humans by waterborne transmission;

(95) “Water company” means one that meets the requirements of section 25-32a of the Connecticut General Statutes;

(96) “Water system” means all community water systems and non-transient non-community water systems;

(97) “Waterborne disease outbreak” means the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system as determined by the department; and

(98) “Zone of influence” means the land area that directly overlies and has the same horizontal extent as the part of the water table or other potentiometric surface that is perceptibly lowered by the withdrawal of water. The zone of influence delineated by the use of modeling is that area of land in which the water table or potentiometric surface is lowered by at least one-half (0.5) foot. In the event of inadequate information and data to delineate the zone of influence, a radius of one (1) mile shall be utilized for unconsolidated aquifer groundwater sources and a radius of one thousand (1000) feet shall be utilized for confined and bedrock aquifer groundwater sources.

(b) **Watershed survey.** A public water system using surface water as an active source of supply shall make a sanitary survey of the watershed to the intake at least annually. A report on the survey shall be submitted to the Department by March 1 each year covering the preceding calendar year.

(c) **Standards for quality of untreated water prior to treatment.** All parameters shall be tested for each surface source at least annually, except bacteriological and physical tests which shall be done quarterly.

Groundwater sources shall be tested for these parameters when the department determines that the source is vulnerable to contamination.

<i>Parameter</i>	<i>Degree of Treatment</i>	
	<i>Disinfection and Chemical Treatment</i>	<i>Filtration</i>
(1) BACTERIOLOGICAL Coliform Organisms*	Not to exceed 100/100 ml monthly average, based on a running arithmetic average for the most recent twelve month period. No individual sample is to exceed 500/100 ml	Not to exceed 20,000/100 ml as measured by a monthly geometric mean

* If coliform organisms are demonstrated to be not associated with a fecal source on the basis sanitary survey and differential tests, exception may be made.

(2) PHYSICAL	Not to exceed twenty (20) standard units in more than ten percent (10%) of samples for most recent twelve (12) month period	Not to exceed two hundred fifty (250) standard units as measured by a monthly geometric mean.
Color		
Turbidity	The turbidity level as specified in 40 CFR 141.74 (a) (4), in a representative sample of the source water immediately prior to the first or only point of disinfection application shall not exceed (5) Nephelometric Turbidity Units (NTU).	Not to exceed two hundred fifty (250) standard units as measured by a monthly geometric mean.

<i>Parameter</i>	<i>Degree of Treatment</i>	
	<i>Disinfection and Chemical Treatment Level mg/l</i>	<i>Filtration Level mg/l</i>
(3) INORGANIC CHEMICALS		
Arsenic ^(a)	.01	.01
Barium	1	1
Cadmium	.01	.01
Chloride	250	250
Chromium	.05	.05
Copper	.05	1.0
Cyanide	.01	0.2
Flouride	2.0	2.0
Lead	.05	.05
MBAS (methylene blue active substance)	0.5	0.5
Mercury	.002	.005
Nitrate plus Nitrite as N	10	10
Selenium	.01	.01
Silver	.05	.05

^(a) The MCL for arsenic is effective January 23, 2006. Until then the MCL is 0.05 mg/L.

(4) PESTICIDES	All Degrees of Treatment Level mg/L
Endrin	0.002
Lindane	0.0002
Methoxychlor	0.04
Toxaphene	0.003
2,4-D	0.07
2,4,5-TP (silvex)	0.05

(d) **Facility location.** Such as but not limited to treatment plants, pumping stations, storage tanks, etc., but not including water intakes and connecting pipelines.

(1) New facilities are to be located: (A) Above the level of the one hundred year flood. (B) Where chlorine gas will not be stored or used within three hundred feet of any residence. (C) Where the facility is not likely to be subject to fires or other natural or manmade disasters.

(2) The state health department must be notified before entering into a financial commitment for a new public water system or increasing the capacity of an existing public water system, and the approval of the state health department must be obtained before any construction is begun. This includes construction of supply and treatment works, transmission lines, storage tanks, pumping stations and other works of sanitary significance. It does not include the routine extension of laterals or tapping of new service connections.

(e) Water ready for consumption.

(1) Physical Tests. Color is not to exceed fifteen (15) standard units leaving the treatment plant nor at representative sampling points in the distribution system. Turbidity is not to exceed five (5) standard units at representative sampling points in the distribution system.

Odor is not to exceed a value of two (2) in the treatment plant effluent on a scale of 0-5 as follows:

0-None	3-Distinct
1-Very Faint	4-Decided
2-Faint	5-Strong

The pH value is not to be less than 6.4 nor to exceed 10.0 at a point of entry to the distribution system or in the distribution system. A system conducting water quality parameter monitoring for pH in accordance with section 19-13-B102(e)(9)(D) of the Regulations of Connecticut State Agencies shall comply with the pH requirements pursuant to section 19-13-B102(j)(8)(G) of the Regulations of Connecticut State Agencies.

(2) Inorganic Chemicals

Community and non-transient non-community water systems shall test for inorganic chemicals specified below. Transient non-community water systems shall test for nitrate and nitrite only.

Inorganic chemicals^(a) and their limits

Chemical	Maximum Contaminant Level mg/L
Antimony	0.006
Arsenic ^(b)	0.01
Asbestos	7 MFL ¹
Barium	2
Beryllium	0.004
Cadmium	0.005
Chromium	0.1
Cyanide	0.2
Fluoride	4.0
Mercury	0.002
Nickel	0.1
Nitrate nitrogen	10(as N)
Nitrite nitrogen	1(as N)
Nitrate nitrogen plus nitrite nitrogen	10(as N)
Selenium	0.05
Silver	0.05
Sulfate	**
Chloride	250
Thallium	0.002
Lead	***
Copper	***
Sodium	*

Notes

^(a) The method detection limits for inorganic chemicals shall conform to those accepted and approved by EPA as described in 40 CFR 141.23(a), as amended January 22, 2001.

^(b) The MCL for arsenic is effective January 23, 2006. Until then the MCL is 0.05 mg/L.

* Sodium has no MCL, but has a notification level of 28 mg/L. See section 19-13-B102(i)(5)(B) of the Regulations of Connecticut State Agencies for the notification requirements.

** MCL has not been established for this chemical.

*** See section 19-13-B102(j)(6) of the Regulations of Connecticut State Agencies. The MCLG for lead is zero (0) and for copper is 1.3 mg/L.

¹ MFL = million fibers per liter longer than ten (10) micrometers.

(3) Pesticides, Herbicides and PCBs. Community and non-transient non-community water systems shall test for pesticides, herbicides and PCB specified below.

Pesticides, Herbicides, PCB, and their limits

<i>Chemical¹</i>	<i>Maximum Contaminant Level (mg/l)</i>
Alachlor	0.002
Aldicarb	**
Aldicarb sulfoxide	**
Aldicarb sulfone	**
Aldrin	**
Atrazine	0.003
Benzo(A)pyrene	0.0002
Butachlor	**
Carbaryl	**
Carbofuran	0.04
Chlordane	0.002
Dalapon	0.2
Di(2-ethylhexyl)adipate	0.4
Di(2-ethylhexyl)phthalates	0.006
Dicamba	**
Dieldrin	**
Dinoseb	0.007
Diquat	0.02
Dibromochloropropane (DBCP)	0.0002
2,4-D	0.07
Ethylene dibromide (EDB)	0.00005
Endrin	0.002
Endothall	0.1
Glyphosate	0.7
Heptachlor	0.0004*
Heptachlor epoxide	0.0002*
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
3-Hydroxycarbofuran	**
Lindane	0.0002
Methoxychlor	0.04
Methomyl	**
Metolachlor	**
Metribuzin	**
Oxamyl (vydate)	0.2
Picloram	0.5
Propachlor	**
Simazine	0.004

2,3,7,8-TCDD (dioxin)	0.00000003
Polychlorinated biphenyls (PCB)	0.0005
Pentachlorophenol	0.001
Toxaphene	0.003
2,4,5-TP (silvex)	0.05

Notes:

¹The method detection limits for all pesticides, herbicides and PCB shall conform to those accepted and approved by EPA.

**MCL has not been established for this chemical.

*If monitoring results in detection of one (1) or more of these contaminants, then subsequent monitoring shall analyze for all these contaminants.

(4) Organic Chemicals. Community and non-transient non-community water systems shall test for organic chemicals specified below.

Organic chemicals^(a) and their limits.

<i>Chemical^(b)</i>	<i>Maximum Contaminant Level (mg/l)</i>
Benzene	0.005
Bromobenzene	**
Bromomethane	**
n-Butyl Benzene	**
Carbon Tetrachloride	0.005
Chlorobenzene	0.1
Chloroethane	**
Chloromethane	**
o-Chlorotoluene	**
p-Chlorotoluene	**
Dibromomethane	**
m-Dichlorobenzene	**
o-Dichlorobenzene	0.6
p-Dichlorobenzene	0.075
1, 1-Dichloroethane	**
1, 2-Dichloroethane (EDC)	0.005
1, 1-Dichloroethylene	0.007
cis-1, 2-Dichloroethylene	0.07
Trans-1, 2-Dichloroethylene	0.1
Dichloromethane (Methylene chloride)	0.005
1, 2-Dichloropropane	0.005
1, 3-Dichloropropane	**
2, 2-Dichloropropane	**
1, 1-Dichloropropene	**
1, 3-Dichloropropene	**
Ethylbenzene	0.7
Methyl Tert Butyl Ether (MTBE)	**
Naphthalene	**
n-Propyl Benzene	**
Styrene	0.1
1, 1, 1, 2-Tetrachloroethane	**
1, 1, 2, 2-Tetrachloroethane	**

Tetrachloroethylene	0.005
Toluene	1
Total Trihalomethanes (TTHM)	0.100
Bromodichloromethane	*
Bromoform	*
Chlorodibromomethane	*
Chloroform	*
1, 1, 1-Trichloroethane	0.2
1, 1, 2-Trichloroethane	0.005
1, 2, 4-Trichlorobenzene	0.07
Trichloroethylene	0.005
1, 2, 3-Trichloropropane	**
1, 2, 4-Trimethylbenzene	**
1, 3, 5-Trimethylbenzene	**
Vinyl Chloride ^(c)	0.002
Xylenes (total)	10
m-Xylene	***
o-Xylene	***
p-Xylene	***

Notes:

* The MCL for Total Trihalomethanes (TTHM) is 0.100 mg/l, which is the sum of the four (4) constituent Trihalomethanes. This level applies to any CWS until the following dates, on which the MCL for TTHM is lowered to 0.080 MG/L. All systems using surface water and GWUDI in whole or in part and serving at least 10,000 persons shall comply with the TTHM MCL of 0.080 MG/L and all other public water systems shall comply with the MCL for TTHM of 0.080 MG/L by January 1, 2004.

** MCL has not been established for this chemical.

*** The MCL for Xylenes (total) is 10 mg/l, which is the sum of the three (3) constituent Xylenes.

(a) The method detection limit (MDL) for all organic chemicals is 0.0005 mg/l with the exception of MTBE which has an MDL of 0.002 mg/l.

(b) The department may require the testing of other chemicals for which a Maximum Contaminant Level Goal has been proposed by EPA or which the department has reason to believe may be health threatening.

(c) Quarterly analysis for vinyl chloride is required for ground water systems only when one or more of the following compounds are detected: trichloroethylene, 1, 2, Tetrachloroethylene, 1, 2 Dichloroethane, 1, 1, 1 Trichloroethane, Cis 1, 2 Dichloroethylene, Trans 1, 2 Dichloroethylene, or 1, 1 Dichloroethylene. If the first analysis does not detect vinyl chloride, the Department may reduce the frequency of vinyl chloride monitoring to once every three (3) years.

(5) Radioactivity.

(A) Analysis for the contaminants listed in the table in 40 CFR 141.25(a), as amended January 22, 2001, shall be conducted to determine compliance with section 19-13-B102(e)(5)(I) to (L), inclusive, of the Regulations of Connecticut State Agencies in accordance with the methods described in 40 CFR 141.25(a), as amended January 22, 2001, or their equivalent determined by EPA in accordance with 40 CFR 141.27, as amended August 27, 1980.

(B) When the identification and measurement of radionuclides other than those listed in 40 CFR 141.25(a), as amended January 22, 2001, is required, the references listed in 40 CFR 141.25(b)(1), as amended January 22, 2001, and 40 CFR 141.25(b)(2), as amended January 22, 2001, are to be used, except in cases where alternative methods have been approved in accordance with 40 CFR 141.27, as amended August 27, 1980.

(C) For the purpose of monitoring radioactivity concentrations in drinking water, the required sensitivity of the radioanalysis is defined in terms of a detection limit. The detection limit shall be that concentration which can be counted with a precision

of plus or minus 100 percent at the 95 percent confidence level (1.96σ where σ is the standard deviation of the net counting rate of the sample).

(i) To determine compliance with section 19-13-B102(e)(5)(I) of the Regulations of Connecticut State Agencies, the detection limit shall not exceed the concentrations in Table 1.

TABLE 1.—Detection Limits for Gross Alpha Particle Activity, Radium 226, Radium 228, and Uranium

CONTAMINANT	DETECTION LIMIT
Gross alpha particle activity	3 pCi/L
Radium 226	1 pCi/L
Radium 228	1 pCi/L
Uranium	1 μ g/L

(ii) To determine compliance with Section 19-13-B102(e)(5)(J) of the Regulations of Connecticut State Agencies, the detection limits shall not exceed the concentrations listed in Table 2.

TABLE 2—Detection Limits for Man-Made Beta Particle and Photon Emitters

RADIONUCLIDE	DETECTION LIMIT
Tritium	1,000 pCi/L
Strontium-89	10 pCi/L
Strontium-90	2 pCi/L
Iodine-131	1 pCi/L
Cesium-134	10 pCi/L
Gross beta	4 pCi/L
Other radionuclides	1/10 of the applicable limit

(D) To judge compliance with the maximum contaminant levels listed in section 19-13-B102(e)(5)(I) to (L), inclusive, of the Regulations of Connecticut State Agencies, averages of data shall be used and shall be rounded to the same number of significant figures as the maximum contaminant level for the substance in question.

(E) The department may determine compliance or initiate enforcement action based upon analytical results or other information compiled by their sanctioned representatives and agencies.

(F) Monitoring and compliance requirements for gross alpha particle activity, radium-226, radium-228, and uranium.

(i) Community water systems (CWS) shall conduct initial monitoring to determine compliance with section 19-13-B102(e)(5)(I) of the Regulations of Connecticut State Agencies by December 31, 2007. For the purposes of monitoring for gross alpha particle activity, radium-226, radium-228, uranium, and beta particle and photon radioactivity in drinking water, “detection limit” is defined as in section 19-13-B102(e)(5)(C) of the Regulations of Connecticut State Agencies.

(I) Applicability and sampling location for existing community water systems or sources. All existing CWS using ground water, surface water or systems using both ground and surface water (for the purpose of this section hereafter referred to as systems) shall sample at every entry point to the distribution system that is representative of all sources being used (hereafter called a sampling point) under normal operating conditions. The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source.

(II) Applicability and sampling location for new community water systems or sources. All new CWS or CWS that use a new source of water shall begin to conduct initial monitoring for the new source within the first quarter after initiating use of the source. CWS shall conduct more frequent monitoring when ordered by the department in the event of possible contamination or when changes in the distribution system or treatment processes occur which may increase the concentration of radioactivity in finished water.

(i) Initial monitoring: systems shall conduct initial monitoring for gross alpha particle activity, radium-226, radium-228, and uranium as follows:

(I) Systems shall collect four consecutive quarterly samples at all sampling points before December 31, 2007.

(II) For gross alpha particle activity, uranium, radium-226, and radium-228 monitoring, the department may waive the final two quarters of initial monitoring for a sampling point if the results of the samples from the previous two quarters are below the detection limit specified in Table 1 of section 19-13-B102(e)(5)(C)(i) of the Regulations of Connecticut State Agencies.

(III) If the average of the initial monitoring results for a sampling point is above the MCL, the system shall collect and analyze quarterly samples at that sampling point until the system has results from four consecutive quarters that are at or below the MCL, unless the system enters into another schedule as part of a formal compliance agreement with the department.

(iii) Reduced monitoring: the department may grant permission to a community water system to reduce the future frequency of monitoring from once every three years to once every six or nine years at each sampling point, based on the following criteria:

(I) If the average of the initial monitoring results for each contaminant (i.e., gross alpha particle activity, uranium, radium-226, or radium-228) is below the detection limit specified in Table 1, in section 19-13-B102(e)(5)(c)(i) of the Regulations of Connecticut State Agencies, the system shall collect and analyze for that contaminant using at least one sample at that sampling point every nine years.

(II) For gross alpha particle activity and uranium, if the average of the initial monitoring results for each contaminant is at or above the detection limit but at or below 1/2 the MCL, the system shall collect and analyze for that contaminant using at least one sample at that sampling point every six years. For combined radium-226 and radium-228, the analytical results shall be combined. If the average of the combined initial monitoring results for radium-226 and radium-228 is at or above the detection limit but at or below 1/2 the MCL, the system shall collect and analyze for that contaminant using at least one sample at that sampling point every six years.

(III) For gross alpha particle activity and uranium, if the average of the initial monitoring results for each contaminant is above 1/2 the MCL but at or below the MCL, the system shall collect and analyze at least one sample at that sampling point every three years. For combined radium-226 and radium-228, the analytical results shall be combined. If the average of the combined initial monitoring results

for radium-226 and radium-228 is above 1/2 the MCL but at or below the MCL, the system shall collect and analyze at least one sample at that sampling point every three years.

(IV) Systems shall use the samples collected during the reduced monitoring period to determine the monitoring frequency for subsequent monitoring periods (e.g., if a system's sampling point is on a nine year monitoring period, and the sample result is above 1/2 MCL, then the next monitoring period for that sampling point is three years).

(V) If a system has a monitoring result that exceeds the MCL while on reduced monitoring, the system shall collect and analyze quarterly samples at that sampling point until the system has results from four consecutive quarters that are below the MCL, unless the system enters into another schedule as part of a formal compliance agreement with the department.

(iv) A gross alpha particle activity measurement may be substituted for the required radium-226 measurement provided that the measured gross alpha particle activity does not exceed 5 pCi/L. A gross alpha particle activity measurement may be substituted for the required uranium measurement provided that the measured gross alpha particle activity does not exceed 15 pCi/L. The gross alpha measurement shall have a confidence interval of 95% (1.65σ , where σ is the standard deviation of the net counting rate of the sample) for radium-226 and uranium. When a system uses a gross alpha particle activity measurement in lieu of a radium-226 and/or uranium measurement, the gross alpha particle activity analytical result shall be used to determine the future monitoring frequency for radium-226 and/or uranium. If the gross alpha particle activity result is less than detection, 1/2 the detection limit shall be used to determine compliance and the future monitoring frequency.

(G) Monitoring and compliance requirements for beta particle and photon radioactivity. To determine compliance with the maximum contaminant levels in Section 19-13-B102(e)(5)(J) of the Regulations of Connecticut State Agencies for beta particle and photon radioactivity, a system shall monitor at a frequency as follows:

(i) Community water systems (both surface and ground water) designated by the department as vulnerable shall sample for beta particle and photon radioactivity. Systems shall collect quarterly samples for beta emitters and annual samples for tritium and strontium-90 at each entry point to the distribution system (hereafter called a sampling point), beginning within one quarter after being notified by the department. Systems already designated by the department shall continue to sample until the department reviews and either reaffirms or removes the designation.

(I) If the gross beta particle activity, or the gross beta particle activity minus the naturally occurring potassium-40 beta particle activity at a sampling point has a running annual average (computed quarterly) less than or equal to 50 pCi/L (screening level), the department may reduce the frequency of monitoring at that sampling point to once every 3 years. Systems shall collect all samples required in paragraph (G)(i) of this section during the reduced monitoring period.

(ii) Community water systems (both surface and ground water) designated by the department as utilizing waters contaminated by effluents from nuclear facilities shall sample for beta particle and photon radioactivity. Systems shall collect quarterly samples for beta emitters and iodine-131 and annual samples for tritium and strontium-90 at each entry point to the distribution system (hereafter called a sampling point), beginning within one quarter after being notified by the department. Systems already designated by the department as systems using waters contaminated by effluents from nuclear facilities shall continue to sample until the department reviews and either reaffirms or removes the designation.

(I) Quarterly monitoring for gross beta particle activity shall be based on the analysis of monthly samples. The quarterly result is an average of the three monthly results.

(II) For iodine-131, a composite of five consecutive daily samples shall be analyzed once each quarter. As ordered by the department, and in consultation with the community water system, more frequent monitoring shall be conducted when iodine-131 is identified in the finished water.

(III) Annual monitoring for strontium-90 and tritium shall be conducted by means of the analysis of four quarterly samples. The annual result is an average of the four quarterly results.

(IV) If the gross beta particle activity beta minus the naturally occurring potassium-40 beta particle activity at a sampling point has a running annual average (computed quarterly) less than or equal to 15 pCi/L (screening level), the department may reduce the frequency of monitoring at that sampling point to every 3 years. Systems shall collect all samples required in subparagraph (G)(ii) of this subdivision during the reduced monitoring period.

(iii) Community water systems designated by the department to monitor for beta particle and photon radioactivity may not apply to the Department for a waiver from the monitoring frequencies specified in Section 19-13-B102(e)(5)(G)(i) or (ii) of the Regulations of Connecticut State Agencies.

(iv) Community water systems may analyze for naturally occurring potassium-40 beta particle activity from the same or equivalent sample used for the gross beta particle activity analysis. Systems may subtract the potassium-40 beta particle activity value from the total gross beta particle activity value to determine if the screening level is exceeded. The potassium-40 beta particle activity shall be calculated by multiplying elemental potassium concentrations (in mg/L) by a factor of 0.82.

(v) If the gross beta particle activity minus the naturally occurring potassium-40 beta particle activity exceeds the screening level, an analysis of the sample shall be performed to identify the major radioactive constituents present in the sample and the appropriate doses shall be calculated and summed to determine compliance with Section 19-13-B102(e)(5)(J) of the Regulations of Connecticut State Agencies, using the formula in 40 CFR 141.66(d)(2), as amended December 7, 2000. Doses shall also be calculated and combined for measured levels of tritium and strontium to determine compliance.

(vi) Systems shall monitor monthly at the sampling point(s) which exceed the maximum contaminant level in Section 19-13-B102(e)(5)(J) of the Regulations of Connecticut State Agencies, beginning the month after the exceedance occurs. Systems shall continue monthly monitoring until the system has established, by a rolling average of 3 monthly samples, that the MCL is being met. Systems who establish that the MCL is being met shall return to quarterly monitoring until they meet the requirements set forth in Section 19-13-B102(e)(5)(G)(i)(I) or section 19-13-B102(e)(5)(G)(ii)(I) of the Regulations of Connecticut State Agencies.

(H) General monitoring and compliance requirements for radionuclides.

(i) The Department may require more frequent monitoring than specified in Section 19-13-B102(e)(5)(F) or (G) of the Regulations of Connecticut State Agencies, or may require confirmation samples for positive and negative results when the department determines that the source of supply is vulnerable or subject to contamination. The results of the initial and confirmation samples shall be averaged for use in compliance determinations.

(ii) Each public water systems shall monitor at the time designated by the department during each compliance period.

(iii) Compliance: Compliance with Section 19-13-B102(e)(5)(I) and (J) of the Regulations of Connecticut State Agencies, shall be determined based on the analytical result(s) obtained at each sampling point. If one sampling point is in violation of an MCL, the system is in violation of the MCL.

(I) For systems monitoring more than once per year, compliance with the MCL is determined by a running annual average at each sampling point. If the average of any sampling point is greater than the MCL, then the system is out of compliance with the MCL.

(II) For systems monitoring more than once per year, if any sample result causes the running average to exceed the MCL at any sample point, the system is out of compliance with the MCL immediately.

(III) Systems shall include all samples taken and analyzed under the provisions of this section in determining compliance, even if that number is greater than the minimum required.

(IV) If a system does not collect all required samples when compliance is based on a running annual average of quarterly samples, compliance shall be based on the running average of the samples collected.

(V) If a sample result is less than the detection limit, zero shall be used to calculate the annual average, unless a gross alpha particle activity is being used in lieu of radium-226 and/or uranium. If the gross alpha particle activity result is less than detection, 1/2 the detection limit shall be used to calculate the annual average.

(iv) If the department determines there has been an error in the methods applied to the collection or analysis of the sample, the department shall invalidate the sample result.

(v) If the MCL for radioactivity set forth in Section 19-13-B102(e)(5)(I) and (J) of the Regulations of Connecticut State Agencies, is exceeded, the community water system shall give notice to the department pursuant to section 19-13-B102(h) and (i), of the Regulations of Connecticut State Agencies and shall conform to public notification and consumer confidence reporting requirements pursuant to section 19-13-B102(i) of the Regulations of Connecticut State Agencies.

(I) MCL for uranium, combined radium-226 and radium-228, and gross alpha particle activity (excluding radon and uranium). The maximum contaminant levels for uranium, combined radium-226 and radium-228 and gross alpha particle activity (including radium-226 but excluding radon and uranium) are listed in Table 3.

TABLE 3

Contaminant	Maximum Contaminant Level
Combined radium-226 and radium-228	5 Picouries Per Liter (pCi/L)
Gross alpha particle activity (including radium-226 but excluding radon and uranium)	15 pCi/L
Uranium	30 µg/l (Micrograms/Liter)

NOTE: The combined radium-226 and radium-228 value is determined by the addition of the results of the analysis for radium-226 and the analysis for radium-228.

(J) MCL for beta particle and photon radioactivity. The average annual concentration of beta particle and photon radioactivity from man-made radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any

internal organ greater than 4 millirem/year (mrem/yr), as listed in Table 4. Except for radionuclides listed in Table 5, the concentration of man-made radionuclides causing 4 mrem total body or organ dose equivalents shall be calculated as described in 40 CFR 141.66(d)(2), as amended December 7, 2000. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 mrem/yr.

TABLE 4

Contaminant	Maximum Contaminant Level
Beta particle and photon radioactivity.	Concentration shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 mrem/yr

TABLE 5 – average annual concentrations assumed to produce: a total body or organ dose of 4 mrem/yr

Contaminant	Critical Organ	Level
Tritium	Total body	20,000 pCi/L
Strontium-90	Bone Marrow	8 pCi/L

(K) Compliance dates. Compliance dates for combined radium-226 and –radium-228, gross alpha particle activity, gross beta particle and photon radioactivity, and uranium: Community water systems shall comply with the MCLS listed in paragraphs (I) and (J) of this section and compliance shall be determined in accordance with the requirements of paragraphs (A) to (H), inclusive, of this section. Compliance with reporting requirements for the radionuclides under section 19-13-B102(i) of the Regulations of Connecticut State Agencies is required.

(L) The best available technologies (BATS) for compliance with the MCLS for radionuclides shall conform to those approved by the U.S. EPA and specified in 40 CFR 141.66, as amended December 7, 2000.

(6) Total coliforms.

(A) The MCLG for microbiological contaminants which includes E. coli and fecal coliforms is zero (0).

(B) The maximum contaminant level (MCL) is based on the presence or absence of total coliforms in a sample, rather than coliform density. Compliance shall be based on a monthly MCL for total coliforms.

(i) For a system which collects at least forty (40) samples per month, if more than five percent (5.0%) of the samples collected during a month are total coliform-positive, the system is in violation of the MCL for total coliforms.

(ii) For a system which collects fewer than forty (40) samples per month, if more than one (1) sample collected during a month is total coliform-positive, the system is in violation of the MCL for total coliforms.

(C) A system shall determine compliance with the MCL for total coliforms for each month in which it is required to monitor for total coliforms.

(D) Analytical methodology.

(i) Analytical methods for total coliform. The analysis for total coliform should be conducted using either the membrane filter (MF) technique, or the 10-tube multiple tube fermentation (MTF) technique (five (5) tubes may be utilized provided they collectively equal one hundred (100) ml), or the presence-absence (P-A) coli-

form test, or the colilert system as approved and specified in 40 CFR 141.21 (f). The standard sample volume required for total coliform analysis, regardless of analytical method used, is one hundred (100) ml.

(ii) Analytical methods for fecal coliforms. The use of EC medium for determining the presence of fecal coliform in a total coliform-positive culture is required. The procedure for fecal coliform analysis shall conform to those approved by EPA.

(iii) Analytical methods for E. Coli. The analysis for E. Coli shall be conducted using either the EC medium plus MUG (4-methylumbelliferyl-B-D-glucuronide), the nutrient agar plus MUG test or other testing methods which conform to those approved by EPA.

(7) Monitoring requirements

(A) The monitoring frequency for total coliforms and physical parameters for a community water system (CWS) and a consecutive public water system is based on the population served by the system, and the frequency is as follows:

Table 1

<i>Population Served</i>	<i>Minimum Number Of Routine Samples Per Month</i>
25 to 1,000	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
96,001 to 130,000	100
130,001 to 220,000	120
220,001 to 320,000	150
320,001 to 450,000	180
450,001 to 600,000	210
600,001 to 780,000	240
780,001 to 970,000	270

If a CWS serving twenty-five (25) to one-thousand (1,000) persons has no history of total coliform violation in its current configuration, and a sanitary survey conducted in the past five (5) years shows that the system is supplied solely by a

protected ground water source, and is free of sanitary defects pursuant to sections 19-13-B51a through 19-13-B51m of the Regulations of Connecticut State Agencies; the department may, if it is satisfied that this water is safe for consumption, reduce the monitoring frequency specified to no less than one (1) sample per quarter. Department approval of the reduced monitoring frequency shall be in writing. Water samples shall be collected by technical personnel employed by an environmental laboratory approved by the department under section 25-40 of the Connecticut General Statutes, or a certified distribution system operator, or a certified treatment plant operator, or a sanitarian, or an employee of the department, or a person under the direct supervision of either a certified distribution system operator, or a certified treatment plant operator.

The residual disinfectant concentration shall be measured at the same point in the distribution system and at the same time as total coliforms are sampled, as specified in this subparagraph and subparagraph (G) of this subdivision. The presence of a residual disinfectant concentration in a sample from a system that is not approved for continuous chlorination shall invalidate the sample.

(B) The monitoring frequency for total coliforms and physical parameters for non-community water systems is as follows:

(i) A non-community water system using only ground water sources that are not under the direct influence of surface water and serving one thousand (1,000) persons or fewer shall monitor during each calendar quarter that the system provides water to the public, except that the department may reduce this monitoring frequency, in writing, to no less than once a year if a sanitary survey shows that the system is free of sanitary defects pursuant to sections 19-13-B51a through 19-13-B51m of the Regulations of Connecticut State Agencies.

(ii) A non-community water system using only ground water sources that are not under the direct influence of surface water and serving more than one thousand (1,000) persons shall monitor as specified in Table 1. Monitoring shall begin no later than December 31, 1990.

(iii) A non-community water system using surface water, in total or in part, shall monitor at the frequency specified in Table 1, regardless of the number of persons it serves. Monitoring shall begin no later than December 31, 1990.

(iv) A non-community water system using groundwater under the direct influence of surface water, shall monitor at the frequency specified in Table 1. Monitoring shall begin six (6) months after the department determines that the ground water is under direct influence of surface water.

(v) The residual disinfectant concentration shall be measured at the same point in the distribution system and at the same time as total coliforms are sampled, as specified in this subparagraph and subparagraph (G) of this subdivision. The presence of a residual disinfectant concentration in a sample from a system that is not approved for continuous chlorination shall invalidate the sample.

(C) Community and non-transient non-community water systems shall conduct monitoring beginning in the initial compliance period to determine compliance with the MCLs specified in subdivisions 2, 3, and 4 of subsection 19-13-B102(e) of the Regulations of Connecticut State Agencies. Systems serving fewer than one hundred and fifty (150) service connections shall begin monitoring in the second compliance period for the following chemicals: Benzo(a)pyrene, Dalapon, Di(2-ethylhexyl) adipate, Di(2-ethylhexyl)phthalate, Dinoseb, Diquat, Endothall, Endrin, glyphosate, Hexachlorobenzene, Hexachlorocyclopentadiene, oxamyl(vydate), Picloram, Simazine, 2,3,7,8-TCDD(Dioxin).

(i) Monitoring frequency for community and non-transient non-community water systems

Contaminant	BASE SAMPLING REQUIREMENT		REDUCED SAMPLING REQUIREMENT ⁽⁵⁾	
	Ground Water Systems	Surface Water Systems ⁽⁴⁾	Ground Water Systems	Surface Water Systems
Asbestos	Every 9 yrs.	Every 9 yrs.	Not Applicable	Not Applicable
Nitrate ⁽¹⁾ Nitrite ⁽¹⁾	Annually	Quarterly	Not Applicable	Annually ⁽²⁾
Inorganic Chemicals	Every 3 yrs.	Annually	Not Applicable	Not Applicable
Organic Chemicals	Quarterly ⁽⁶⁾	Quarterly ⁽⁶⁾	Annually ⁽³⁾	Annually ⁽³⁾
Pesticides Herbicides and PCBs	Quarterly ⁽⁶⁾	Quarterly ⁽⁶⁾	Systems serving more than 3300 persons: two quarters per year every 3 years ⁽³⁾ . Systems serving 3300 persons or less; every 3 years ⁽³⁾	

Notes:

⁽¹⁾ Each transient non-community water system shall monitor annually for nitrate and nitrite beginning January 1, 1993.

⁽²⁾ Applicable only if all analytical results from four consecutive quarters are less than fifty percent (50%) of the MCL.

⁽³⁾ Applicable only if no single contaminant is detected in the results of the four (4) consecutive quarters of the base sampling requirement.

* Reduce to once every three (3) years after three (3) years of no detection of any contaminant in annual sampling.

⁽⁴⁾ Or groundwater under the influence of surface water systems.

⁽⁵⁾ Applicable only if granted in writing by the department.

⁽⁶⁾ See sections 19-13-B102(e)(7)(C)(x), (xiv) and (xvi) of the Regulations of Connecticut State Agencies for exception.

(ii) A system shall monitor quarterly beginning in the next quarter, if in any one sample Inorganic chemical, with the exception of nitrate and nitrite, exceeds the MCL; organic chemical, pesticide, herbicide or PCB is detected at a level exceeding the MDL; or nitrate or nitrite exceeds or equals fifty percent (50%) of the MCL.

(iii) The department may decrease the quarterly monitoring requirement of section 19-13-B102(e)(7)(C)(ii) of the Regulations of Connecticut State Agencies for inorganic chemicals, with the exception of nitrate and nitrite, to the base sampling requirement and organic chemicals along with pesticides, herbicides and PCB to annual sampling provided it has determined that the system is reliably and consistently below the MCL for a minimum of two (2) consecutive quarters for a groundwater system and a minimum of four (4) consecutive quarters for a surface water system. The department may decrease the quarterly monitoring requirement for systems which violated the MCL for organic chemicals, pesticides, herbicides and PCB to annual sampling provided that the system is reliably and consistently below the MCL for a minimum of four (4) consecutive quarters. The department may decrease the quarterly monitoring requirement for systems, which exceeded the MDL for a contaminant that does not have an established MCL, to the reduced sampling requirement.

(iv) After three (3) consecutive annual samples as required in section 19-13-B102(e)(7)(C)(iii) of the Regulations of Connecticut State Agencies are less than the MDL the department may allow a system to reduce the sampling frequency for organic chemicals, pesticides, herbicides and PCB to the reduced sampling requirement.

(v) After four (4) consecutive quarterly samples as required in section 19-13-102(e)(7)(C)(ii) of the Regulations of Connecticut State Agencies are reliably and consistently less than the MCL for a groundwater system and less than fifty percent (50%) of the MCL for a surface water system, the department may allow a system to reduce the sampling frequency for nitrate and nitrite to annually.

(vi) After the initial round of quarterly sampling is completed, a system that is monitoring annually shall take subsequent samples during the quarter(s) that resulted in the highest analytical result.

(vii) The department may increase the required monitoring frequency to detect variations within the system.

(viii) Each public water system shall monitor at the time designated by the department within each compliance period.

(ix) The department may determine compliance or initiate enforcement action based upon analytical results or other information compiled by its representatives.

(x) With the exception of nitrate, nitrite and TTHM, the department may allow the use of monitoring data collected after January 1, 1990 to satisfy the base sampling requirement provided the data is generally consistent with subsection 19-13-B102(e) of the Regulations of Connecticut State Agencies for pesticides, herbicides, PCBs, organic chemicals and inorganic chemicals. Systems which use grandfathered samples of organic chemicals and did not detect any contaminant listed in subsection 19-13-B102(e)(4) of the Regulations of Connecticut State Agencies shall monitor annually beginning January 1, 1993.

(xi) Public water systems utilizing surface water or groundwater under the direct influence of surface water as a source of supply and serving less than 10,000 persons and community water systems that serve 10,000 or more persons shall analyze for total trihalomethanes (TTHM) at quarterly intervals on at least four (4) water samples for each entry point to the system.

Samples shall be collected in the distribution system at a location(s) approved by the department. The monitoring frequency of (TTHM) may be reduced pursuant to 40 CFR 141.30. The reduced monitoring frequency shall be approved in writing by the department. When trihalomethanes are detected in water entering the distribution system as a result of disinfection, the department may exempt public water systems serving less than 10,000 people and utilizing groundwater from the quarterly testing requirement of section 19-13-B102(e)(7)(C)(ii) of the Regulations of Connecticut State Agencies provided the department determines that such testing is not necessary for the protection of the public health.

CWS that detects TTHM above 0.080 mg/L, but below 0.100 mg/L, as an annual average monitored and calculated under this subclause shall include health effects language prescribed in appendix A to 40 CFR 141 subpart O to their annual consumer confidence report.

Revised requirements detailed in subdivision (11) of this subsection take precedence over these requirements beginning on the effective date of this section. After December 31, 2003, this subclause is no longer applicable.

(xii) The department may grant a public water system a waiver from monitoring for dioxin if the department determines that the watershed or zone of influence has not been or is not being used for any of the following land uses: pesticides and herbicides manufacturer, pulp and paper manufacturer, plastics manufacturer, wood preservative manufacturer, landfill and domestic waste transfer station, or hazardous waste disposal facility: and that the public water system has no water quality history indicating the presence of dioxin. The waiver shall be in writing and is subject to renewal for each compliance period.

(xiii) The department may grant a public water system a waiver from monitoring for endotoxin if the department determines that within the past year treatment with endotoxin has not been applied to any body of water, turf on sod farms or golf courses within the watershed or zone of influence of the source of supply. The waiver shall be in writing and is subject to renewal for each compliance period.

(xiv) The department may grant a public water system a waiver from the monitoring requirement for pesticides, herbicides and PCB if the department determines that the public water systems previous analytical results, collected from the source of supply and analyzed in accordance with the EPA's approved testing techniques and methodologies, showed no detectable limit of the contaminant to be waived and the source of supply is constructed and protected pursuant to sections 19-13-B32 and 19-13-B51d of the Regulations of Connecticut State Agencies. The waiver shall be in writing and is subject to renewal for each compliance period.

(xv) Instead of performing the monitoring requirements for the chemicals in section 19-13-B102(c)(3) of the Regulations of Connecticut State Agencies that do not have an established MCL, systems serving fewer than one hundred and fifty (150) service connections may send a letter to the department stating that the system is available for sampling. This letter shall be sent to the department by January 1, 1994. The system shall not send such samples to the department, unless requested to do so by the department.

(xvi) The department may grant a public water system a waiver from the monitoring requirement for organic chemicals (VOCs) if the department determines that the contaminant has not been previously used within the watershed or zone of influence and that the system's initial monitoring results showed no detectable limit of the contaminant to be waived. The waiver shall be in writing and is subject to renewal for each compliance period. As a condition of the waiver, the system shall take one (1) sample at each sampling point during the time the waiver is effective.

(xvii) All systems that use a new source of water that began operation after January 22, 2004, shall demonstrate compliance with the MCL for inorganic chemicals, organic chemicals, pesticides, herbicides, and PCBs. The system shall also comply with the initial sampling frequencies specified by the department to ensure a system can demonstrate compliance with the MCL. Routine and increased monitoring frequencies shall be conducted in accordance with the requirements in this section.

(D) Sampling sites.

(i) Systems shall collect total coliform and physical samples at sites that are representative of water throughout the distribution system, according to that system's written sample siting plan. These plans are subject to department review, revision and approval. Systems shall collect the monthly samples at regular intervals throughout the month, except that a system that uses ground water sources that are not under the direct influence of surface water and serves one thousand (1,000) persons or fewer, may collect all required samples on a single day if they are taken from different sites. The siting plan is to be reviewed as necessary and is subject to approval by the department, usually in conjunction with the sanitary surveys.

(ii) Samples for organic chemicals, inorganic chemicals, pesticides, herbicides and PCB shall be collected after treatment, if any, at every entry point to the distribution system which is representative of each active source of supply. If the system draws water from more than one active source of supply and the sources are blended before distribution, and the system elects to sample the blended water, the system shall then sample at an entry point to the system during periods when water representative of these sources is being used. The department may designate

additional sampling points within the distribution system or at consumers' taps, which more accurately determine consumer exposure. All samples shall be taken at the same sampling point unless the department determines that conditions make another sampling point more representative of each source, treatment plant or the distribution system. If a source is not active, it shall be tested when activated and subject to approval by the department prior to being put into service.

(iii) Systems shall collect the asbestos sample(s) from the distribution system at a location that is representative of each entry point. When applicable, the sample(s) shall be collected from a tap served by an asbestos cement pipe and under conditions where asbestos contamination is most likely to occur.

(iv) The department may reduce the total number of samples a system shall analyze for asbestos, organic chemicals, pesticides, herbicides and PCB by allowing the use of compositing. Composite samples from a maximum of five (5) sampling points within a single system for all public water systems and from different systems for systems serving three thousand three hundred (3,300) persons or less are allowed, provided that the method detection limit (MDL) used for analysis multiplied by the number of composite samples is less than the MCL (e.g., MDL multiplied by the number of samples is less than the MCL). Compositing of samples shall be done in a state approved laboratory and analyzed within fourteen (14) days of sample collection. If the concentration in the composite sample is greater than or equal to the method detection limit of any contaminant listed in subsections (e)(2) through (e)(4) of this section, then a follow-up sample shall be taken and analyzed within fourteen (14) days from each sampling point included in the composite. These samples shall be analyzed for the contaminants that were detected in the composite sample. If duplicates of the original sample taken from each sampling point used in the composite are available, then the system may use these instead of resampling. The duplicates shall be analyzed and the results reported to the department within fourteen (14) days of collection.

(E) Sanitary surveys.

(i) Frequency of sanitary surveys for a public water system collecting fewer than five (5) total coliform samples/month is as follows:

<i>System Type</i>	<i>Initial Survey Completed By</i>	<i>Frequency Of Subsequent Surveys</i>
Community Water System	6/29/94	Every 5 Years
Non-community Water System	6/29/99	Every 5 Years ¹

Note:

¹ For a non-community water system which uses only protected and disinfected groundwater in accordance with sections 19-13-B51a through 19-13-B51(1) of the regulations of Connecticut State Agencies, the sanitary survey may be repeated every ten (10) years, instead of every five (5) years.

(ii) Only the department or an agent approved by the department may conduct a sanitary survey. The department shall review the sanitary survey results to determine the adequacy of the system, including the existing monitoring frequency. The system is responsible for ensuring that the survey takes place.

(iii) In conducting a sanitary survey of a system using groundwater, information on sources of contamination within the delineated wellhead protection area shall be considered. If such information had been collected since the last sanitary survey, a special study to collect new information is not necessary.

(iv) A system that provides water from a surface water source or a groundwater source under the direct influence of surface water, and that provides and operates treatment pursuant to section 19-13-B102 (j)(2) of the Regulations of Connecticut State Agencies, shall respond in writing to a significant deficiency stated in a department’s sanitary survey report no later than forty-five (45) days after the system’s receipt of such a report. The system’s response shall indicate how and on what schedule the system will address the significant deficiency as defined in subsection (a) of this section. The department, or an agent approved by the Department, shall perform a sanitary survey of community water systems every three (3) years. The department, or an agent approved by the department, shall perform a sanitary survey of non-community water systems every five (5) years.

(F) Invalidation of total coliform-positive samples. The department may invalidate a total coliform-positive sample only if:

(i) The department approved laboratory establishes and verifies in writing that improper sample analysis caused the total coliform-positive result.

(ii) The system determines that the contamination is a domestic or other non-distribution system plumbing problem on the basis that one (1) or more repeat sample(s) taken at the same tap as the original total coliform-positive sample is total coliform-positive, but all repeat samples at nearby sampling locations are total coliform-negative. (The department cannot invalidate a total coliform-positive sample on the basis of repeat samples if all the repeat samples are total coliform-negative, or if the system has only one (1) service connection.)

(iii) The department has substantial grounds to believe that a total coliform-positive result is due to some circumstance or condition that does not reflect water quality in the distribution system, if the basis for this determination with the rationale for the decision is documented in writing, this document is signed and approved by the supervisor of the department official who makes this determination, and the documentation is made available to EPA and the public. In this case, the system shall still collect all repeat samples as required in subparagraph (G) of subsection 19-13-B102(e)(7) of the regulations of Connecticut State Agencies. The department may not invalidate a total coliform-positive sample solely on the grounds that all repeat samples are total coliform-negative.

(G) Repeat monitoring/additional routine samples:

(i) If a routine sample is confirmed total coliform-positive, the system shall collect a set of repeat samples within twenty-four (24) hours of the confirmed positive result according to Table 2.

Table 2 - Monitoring Requirements Following A Total Coliform-Positive Routine Sample:

<i>Routine Samples/Mo.</i>	<i>Repeat Samples¹</i>	<i>Routine Samples Next Month²</i>
1/Mo. or fewer	4	5/Mo.
2/Mo.	3	5/Mo.
3/Mo.	3	5/Mo.
4/Mo.	3	5/Mo.
5/Mo. or more	3	Table 1 ³

¹ Number of repeat samples in the same month for each total coliform-positive routine sample.

² Except where the department has invalidated the original routine sample.

³ System need not take any additional samples beyond those it is required to take according to Table 1.

The department shall extend the twenty-four (24) hour limit to no more than ninety-six (96) hours provided the system verifies that their contract laboratory is closed for the weekend or holidays or their sample sites are unavailable. (Waiver shall be requested and granted before the original twenty-four(24) hour period elapses.)

(ii) The system shall collect at least one (1) repeat sample from the sampling tap where the original total coliform-positive sample was taken and at least one (1) repeat sample at a tap within five (5) service connections upstream and at least one repeat sample at a tap within five (5) service connections downstream of the original sampling site. For those systems that shall collect four (4) repeat samples, the fourth repeat sample can be collected from any distribution sampling point within the system. If a total coliform-positive sample is at the end or at the beginning of the distribution system, the system shall collect one (1) repeat sample at the original sampling point and the other required repeat samples at sampling points within five (5) service connections upstream or downstream from the original sampling point.

(iii) The system shall collect all repeat samples on the same day, except that the department may allow a system with a single service connection to collect the required set of repeat samples over a four-day period or to collect a larger volume repeat sample(s) in one (1) or more sample containers of any size, as long as the total volume collected is at least 400 ml (300 ml for systems that collect more than one (1) routine sample/month) provided four (4) separate sampling locations are not available.

(iv) If a system collecting fewer than five (5) routine samples per month has one (1) or more total coliform-positive samples and the department does not invalidate the sample(s), it shall collect at least five (5) routine samples during the next month the system provides water to the public.

(v) If after a system collects a routine sample and before it learns the results of the analysis of that sample, it collects another routine sample(s) from within five (5) adjacent service connections of the initial sample, and the initial sample after analysis is found to contain total coliforms; then the system may count the subsequent sample(s) as a repeat sample instead of as a routine sample.

(vi) If one (1) or more repeat samples in the set is confirmed total coliform-positive, the system shall collect an additional set of repeat samples. The system shall collect the additional samples within twenty-four (24) hours of the confirmed positive result, unless the department extends the limit as noted in subparagraph (7)(G)(i) of this subsection. The system shall repeat this process until either total coliforms are not detected in one (1) complete set of repeat samples or the system determines that the MCL for total coliforms has been exceeded and notifies the department.

(vii) Results of all routine and repeat samples not invalidated by the department shall be included in determining compliance with the MCL for total coliforms. Special purpose samples shall not be used to determine compliance with the MCL for total coliforms.

(H) A system that uses a groundwater source under the direct influence of surface water, and that does not provide and operate treatment pursuant to section 19-13-B102 (j)(2) of the Regulations of Connecticut State Agencies, shall collect and test for total coliform and turbidity levels as specified in the following subclauses:

(i) The system shall collect at least one (1) total coliform sample which shall be collected near the first service connection each day the turbidity level of the source

water exceeds one (1) nephelometric turbidity unit (NTU). The system shall collect this coliform sample within twenty-four (24) hours of the first exceedance of one (1) NTU, unless the department waives this requirement as noted in subparagraph (7)(G)(i) of this subsection. Sample results from this coliform monitoring shall be included along with the results of all acceptable, as determined by the department, routine and repeat samples in determining compliance with the MCL for total coliforms.

(ii) The system shall perform tests for turbidity on samples collected, at least daily, at a point or points representative of water entering the distribution system. The system shall conduct such tests in accordance with the method as specified in 40 CFR 141.74(a)(1). When the turbidity of any such sample exceeds one (1) nephelometric turbidity unit (NTU), the sampling shall be repeated and a new test made for turbidity within one hour of the original test or as soon as practical. If the repeat test also exceeds the turbidity limit of one (1) NTU, this shall be reported to the department within twenty-four (24) hours. If the monthly average exceeds one (1) NTU, or if the average of two (2) samples taken on consecutive days exceeds five (5) NTU, it shall be reported to the department within twenty-four (24) hours.

(I) Fecal coliform and E.coli requirements.

(i) If any routine or repeat sample is total coliform-positive, the system shall analyze that total coliform-positive culture medium to determine if fecal coliforms or E.coli are present. The system shall notify the department by the end of the day on which the system is notified of the positive test result but no later than ninety-six (96) hours from the time of sample collection. If the department office is closed, notification shall be made before the end of the next business day.

(ii) If any repeat sample is fecal coliform-positive or E.coli-positive, or if a fecal coliform-positive or E.coli-positive routine sample is followed by a total coliform-positive repeat sample and the repeat sample is not invalidated, the system is in violation of the MCL for total coliforms. This is an acute risk violation of the MCL for total coliforms.

(J) Heterotrophic bacteria interference (HBI). The department approved laboratory shall invalidate any total coliform sample which produces: a turbid culture in the absence of gas production using the multiple tube fermentation (MTF) technique, or a turbid culture in the absence of an acid reaction using the presence-absence (P-A) coliform test, or confluent growth or a colony number that is “too numerous to count” using the membrane filter (MF) technique (unless total coliforms are detected). The system shall collect another sample from the same location within twenty-four (24) hours of the confirmed interference problem, and have it analyzed for total coliforms. If HBI occurs in replacement samples, the system shall continue to resample the same location within twenty-four (24) hours until an acceptable sample is obtained. The results of the acceptable sample shall be included in compliance calculations.

(K) Sampling protocol.

(i) Where a different schedule is prescribed pursuant to federal regulations, as they may be amended from time to time, the more stringent testing schedule shall apply.

(ii) Laboratory analyses shall be conducted using EPA sampling and testing methods and by an environmental laboratory approved by the department under section 25-40 of the Connecticut General Statutes.

(iii) Water samples shall be collected by technical personnel employed by an environmental laboratory approved by the department under section 25-40 of the Connecticut General Statutes, or a certified distribution system operator, or a certified

treatment plant operator, or a sanitarian, or an employee of the department, or a person under the direct supervision of either a certified laboratory, a certified distribution system operator or a certified treatment plant operator.

(iv) Analytical methods for all inorganic chemicals, organic chemicals, pesticides, herbicides and PCB shall conform to those approved by EPA and described in 40 CFR 141.23(k), and 141.24(e), as amended October 29, 2002. Analyses for lead, copper, pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature shall be conducted pursuant to 40 CFR 141.89.

(v) Inorganic samples shall be collected and handled in accordance with 40CFR 141.23(k)(2), as amended March 25, 2003. Samples shall be collected, handled, and tested in accordance with the latest edition of "standard methods for the examination of water and wastewater" or in accordance with EPA guidelines as specified in the most current edition of the "handbook for sampling and sample preservation of water and wastewater" (EPA--600/4-82--029).

(vi) Arsenic sampling results shall be reported to the nearest 0.001 mg/L.

(L) Where the fluoride content is artificially adjusted, tests for fluoride shall be made on each source so adjusted at least daily. The fluoride content of such supplies shall be maintained between 0.8 mg/l and 1.2 mg/l. If the monthly average of the daily tests does not fall within these limits it shall be reported as a failure to comply with this subparagraph. If warranted by conditions that may be detrimental to the health of consumers, samples from each fluoridated source shall be submitted to the department for testing.

(M) Where the water is chlorinated, at least daily tests shall be made for residual chlorine. A system that uses a groundwater source under the direct influence of surface water, and that does not provide and operate treatment pursuant to section 19-13-B102(j)(2) of the Regulations of Connecticut State Agencies, shall disinfect in accordance with section 19-13-B102(j)(3)(B) of the Regulations of Connecticut State Agencies. When groundwater source not under the direct influence of surface water is chlorinated, a free chlorine residual of at least 0.2 mg/l after ten (10) minutes contact, or the equivalent thereof, shall be used.

(N) pH and phosphate monitoring.

(i) Where the pH value is artificially adjusted, tests for pH value shall be made of the treated water daily, or as required by the department.

(ii) Where phosphate or other corrosion control chemicals are used, tests shall be made for the phosphate level or for other chemicals involved in the corrosion control treatment at least once every two weeks, or as required by the department. The tests shall be done at a location(s) approved by the department.

(O) In cases where one (1) system supplies water to a consecutive public water system, tests for inorganic chemicals, organic chemicals, pesticides, herbicides, PCB and radioactive substances need not be made by the consecutive public water system except for lead, copper and asbestos which shall be tested in both systems according to subsection (e)(8) and (e)(7)(C) of this section. Bacteriological and physical tests shall be performed at the required frequencies by both systems. The department may waive asbestos testing for consecutive public water systems if the system can verify that it does not have any asbestos cement pipes in its distribution system.

(P) Confirmation samples.

(i) Where the results of sampling for inorganic chemicals, organic chemicals, pesticides, herbicides and PCB, with the exception of nitrate, nitrite and TTHM exceed the MCL, the department may require that one additional sample be collected

no later than two (2) weeks after the first sample is taken. The confirmation sample shall be collected at the same sampling point as the first sample.

(ii) Where nitrate or nitrite sampling results exceed the MCL, the system shall take a confirmation sample within twenty-four (24) hours of the system's receipt of notification of the analytical results of the first sample. Systems unable to comply with the twenty-four (24) hour sampling requirement shall immediately notify the consumers in accordance with subsection 19-13-B102(i) of the regulations of Connecticut State Agencies. Systems exercising this option shall take and analyze a confirmation sample within two (2) weeks of notification of the analytical results of the first sample.

(iii) The results of the initial and confirmation sample shall be averaged. The resulting average shall be used to determine the system's compliance in accordance with subparagraph (Q) of this subsection. The department has the discretion to delete results of obvious sampling errors.

(iv) The department may require more frequent monitoring than specified or may require confirmation samples for positive and negative results when the department determines that the source of supply is vulnerable and subject to contamination.

(Q) Compliance.

(i) For systems that are conducting monitoring at a frequency greater than annual compliance with the MCL, with the exception of THHM, nitrate and nitrite shall be determined based on the results of a running annual average of quarterly sampling for each sampling location. If more than one (1) sample is collected at a location during a quarter, the results of the samples shall be averaged to obtain a single result of that quarter. If one (1) location's running annual average is greater than the MCL, then the system shall be deemed to be out of compliance. A system deemed out of compliance shall be subject to a departmental enforcement action. If any one (1) positive sample result would cause the annual average to be exceeded, then the system shall be deemed to be out of compliance immediately. The department may also require a resample of a negative result when the validity of the results, as determined by the department, may be inaccurate. All sample results shall be compiled in determining compliance. When calculating results for compliance, any chemical result that is reported as being below the MDL for that chemical shall be counted as a zero (0). If a system fails to collect the required number of samples, compliance shall be based on the average concentration of the total number of samples collected. The system shall not be considered in violation of the MCL until it has completed one year of quarterly sampling. If a confirmation sample is required by the department the determination of compliance shall be based on the average of the two (2) samples.

(ii) If any sample exceeds the MCL for nitrate or nitrite, the system shall take a confirmation sample. The compliance determination is based on the average of the results of the initial and confirmation samples of each sampling point.

(iii) If a system has a distribution system that is physically or hydraulically isolated from other parts of the distribution system, only that part of the system that exceeds an MCL shall be deemed out of compliance. The department shall apply the public notice requirement to that portion of the system, which is out of compliance. Public notice shall be effected pursuant to subsection 19-13-B102(i) of the Regulations of Connecticut State Agencies.

(iv) The best available technologies for compliance with the MCL shall conform to those approved by EPA and specified in 40 CFR 141.61(b), 40 CFR 141.62(c), as amended June 29, 2004, and 40 CFR 141.64(c). Control of treatment processes

to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels is identified as the best means available for achieving compliance with maximum residual disinfectant levels. For surface water and GWUDI systems using conventional treatment, enhanced coagulation or enhanced softening are identified as treatment techniques for controlling disinfection byproduct precursors in drinking water treatment and distribution systems.

(R) Monitoring requirements for systems with a groundwater source under the direct influence of surface water.

For a groundwater source under the direct influence of surface water that is required to provide and operate treatment pursuant to section 19-13-B102(j)(2) of the Regulations of Connecticut State Agencies, the department shall be guided by its document entitled, "Determination Of Groundwater Under The Direct Influence Of Surface Water." Interim monitoring requirements shall be required prior to installation of filtration. Specific requirements shall be determined pursuant to subsections (j)(2)(D), (j)(3)(A), (e)(7)(H), and (e)(7)(M) of this section.

(S) Monitoring requirements for systems that use a surface water source or a groundwater source under the direct influence of surface water, and that provide and operate treatment pursuant to section 19-13-B102(j)(2) of the Regulations of Connecticut State Agencies.

(i) Turbidity measurements as required by section 19-13-B102(j)(4) of the Regulations of Connecticut State agencies shall be performed on representative samples of the system's combined filtered water at a point prior to entering a distribution system using a continuous turbidimeter for the time period the filter(s) contribute(s) water to the system, and the system shall record a turbidity result at least every four (4) hours.

Additionally, if a system serves 10,000 or more persons and uses conventional or direct filtration, the system shall perform turbidity measurements on samples representative of effluent water from each individual filter, using a continuous turbidimeter during the time period the filter contributes water to the combined filter water or serves water to the public. The system shall record the turbidity result at least every fifteen (15) minutes during this period.

Additionally, beginning on January 1, 2005, if a system serves fewer than 10,000 persons and uses conventional or direct filtration, the system shall perform turbidity measurements on samples representative of effluent water from each individual filter, using a continuous turbidimeter during the time period the filter contributes water to the combined filter water or serves water to the public. The system shall record the turbidity result at least every fifteen (15) minutes during this period. If the system only consists of two or fewer filters, the system may conduct continuous monitoring of combined filter effluent turbidity in lieu of individual filter effluent turbidity monitoring. Combined filter effluent turbidity monitoring shall meet the same requirements set forth in this subclause.

If there is a failure in the continuous monitoring equipment, grab sampling every four (4) hours shall be conducted in lieu of continuous monitoring, but for no more than five (5) working days following the failure of the equipment for systems serving 10,000 or more persons and for no more than 14 calendar days for systems serving fewer than 10,000 people. A system shall validate the continuous measurement on a daily basis using the appropriate procedure in the latest edition of "Standard Methods For The Examination Of Water And Wastewater" and shall calibrate the turbidimeters using a procedure specified by the equipment manufacturer. A copy of this publication can be obtained by request to the American Public Health Association in Washington, DC.

The system shall conduct all turbidity measurements in accordance with a method specified in 40 CFR 141.74(a)(1).

(ii) The residual disinfectant concentration of the water entering the distribution system shall be monitored continuously, and the lowest value shall be recorded each day, except that if there is a failure in the continuous monitoring equipment, grab sampling every four (4) hours may be conducted in lieu of continuous monitoring, but for no more than five (5) working days following the failure of the equipment.

(iii) The residual disinfectant concentration shall be measured at least at the same points in the distribution system and at the same time as total coliforms are sampled, as specified in section 19-13-B102(e)(7) of the Regulations of Connecticut State Agencies. Heterotrophic bacteria, measured as heterotrophic plate count (HPC) as specified in 40 CFR 141.74 (a)(1), may additionally be measured and used in conjunction with the measurement for residual disinfectant concentration when determining compliance pursuant to section 19-13-B102(j)(3)(B)(iii) of the Regulations of Connecticut State Agencies.

(iv) A system serving 10,000 or more persons, having a TTHM annual average of greater than or equal to 0.064 mg/L or a HAA5 annual average of greater than or equal to 0.048 mg/L, shall develop a disinfection profile in accordance with 40 CFR 141.172(b) and submit the disinfection profile pursuant to section 19-13-B102(h)(6)(B)(iv) of the Regulations of Connecticut State Agencies.

TTHM and HAA5 annual averages under this subclause, as defined in subsection (a) of this section, shall be based on the monitoring requirement of 40 CFR 141.172(a)(1) through (5) for each respective treatment plant with a surface water source or a groundwater source under the direct influence of surface water.

A system shall monitor and calculate logs of inactivation in accordance with 40 CFR 141.172(b) when developing a disinfection profile, and inactivation values achieved by various disinfectants for giardia lamblia cysts and viruses.

(v) A system serving fewer than 10,000 persons, having a TTHM annual average of greater than or equal to 0.064 mg/L or a HAA5 annual average of greater than or equal to 0.048 mg/L, shall develop a disinfection profile in accordance with 40 CFR 141.532, as amended January 14, 2002, 40 CFR 141.533, as amended January 14, 2002, 40 CFR 141.534, as amended January 14, 2002, 40 CFR 141.535, as amended January 14, 2002 and 40 CFR 141.536, as amended January 14, 2002, and submit the disinfection profile pursuant to section 19-13-B102(h)(6)(B)(iv) of the Regulations of Connecticut State Agencies.

TTHM and HAA5 annual averages under this subclause, as defined in subparagraph (a) of this section, shall be based on samples collected, during the month of the warmest water temperature and at the point of maximum residence time in the distribution system for each respective treatment plant with a surface water source or a groundwater source under the direct influence of surface water.

A system shall monitor and calculate logs of inactivation in accordance with 40 CFR 141.532, as amended January 14, 2002, 40 CFR 141.533, as amended January 14, 2002, 40 CFR 141.534, as amended January 14, 2002, 40 CFR 141.535, as amended January 14, 2002, and 40 CFR 141.536, as amended January 14, 2002, when developing a disinfection profile, and inactivation values achieved by various disinfectants for giardia lamblia cysts and viruses.

(8) Monitoring requirements for lead and copper in tap water.

(A) Sample site location.

(i) By the applicable date for commencement of monitoring under subparagraph (D)(i) of this subdivision, each water system shall complete a materials evaluation

of its distribution system in order to identify a pool of targeted sampling sites that meets the requirements of this subdivision, and that is sufficiently large to ensure that the water system can collect the number of lead and copper tap samples required in subparagraph (C) of this subdivision. All sites from which first draw samples are collected shall be selected from this pool of targeted sampling sites. Sampling sites shall not include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants.

(ii) A water system shall use the information on lead, copper, and galvanized steel that it is required to collect under 40 CFR 141.42(d)(special monitoring for corrosivity characteristics) when conducting a materials evaluation. When an evaluation of the information collected pursuant to 40 CFR 141.42(d) is insufficient to locate the requisite number of lead and copper sampling sites to meet the targeting criteria of this subparagraph, the water system shall review the sources of information listed below in order to identify a sufficient number of sampling sites. In addition, the system shall collect such information where possible in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities): all plumbing codes, permits, and records in the files of the building department(s) that indicate the plumbing materials that are installed within publicly and privately owned structures connected to the distribution system; all inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and all existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, indicating locations that may be particularly susceptible to high lead or copper concentrations.

(iii) The sampling sites selected for a community water system's sampling pool (tier 1 sampling sites) shall consist of single family structures that: contain copper pipes with lead solder installed after 1982 or contain lead pipes; or are served by a lead service line. When multiple-family residences comprise at least twenty percent (20%) of the structures served by a water system, the system may include this type of structures in its sampling pool.

(iv) Any community water system with insufficient tier 1 sampling sites shall complete its sampling pool with tier 2 sampling sites, consisting of buildings, including multiple-family residences that: contain copper pipes with lead solder installed after 1982 or contain lead pipes; or are served by a lead service line.

(v) Any community water system with insufficient tier 1 and tier 2 sampling sites shall complete its sampling pool with tier 3 sampling sites, consisting of single family structures that contain copper pipes with lead solder installed before 1983. A community water system with insufficient tier 1, tier 2, and tier 3 sampling sites shall complete its sampling pool with representative sites throughout the distribution system. For the purpose of this subclause, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

(vi) The sampling sites selected for a non-transient non-community water system (tier 1 sampling sites) shall consist of buildings that: contain copper pipes with lead solder installed after 1982 or contain lead pipes; or are served by a lead service line.

(vii) A non-transient non-community water system with insufficient tier 1 sites to meet the targeting criteria in subparagraph (A)(vi) of this subdivision shall complete its sampling pool with sampling sites that contain copper pipes with lead solder installed before 1983. If additional sites are needed to complete the sampling

pool, the non-transient non-community water system shall use representative sites throughout the distribution system. For the purpose of this subclause, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

(viii) Any water system having a distribution system containing lead service lines shall draw fifty percent (50%) of the samples it collects during each monitoring period from sites that contain lead pipes, or copper pipes with lead solder, and fifty percent (50%) of those samples from sites served by a lead service line. A water system that cannot identify a sufficient number of sampling sites served by a lead service line shall collect first draw samples from all of the sites identified as being served by such lines.

(B) Sample collection methods.

(i) All tap samples for lead and copper collected in accordance with this subsection, with the exception of lead service line samples collected pursuant to sections 19-13-B102(e)(8)(B)(iii) and (v) of the Regulations of Connecticut State Agencies, shall be first-draw samples.

(ii) Each first-draw tap sample for lead and copper shall be one (1) liter in volume and have stood motionless in the plumbing system of each sampling site for at least six (6) hours. First-draw samples from residential housing shall be collected from the cold-water kitchen tap or bathroom sink tap. First-draw samples from a non-residential building shall be one (1) liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. Non-first-draw samples collected in lieu of first-draw samples pursuant to section 19-13-B102(e)(8)(B)(v) of the Regulations of Connecticut State Agencies shall be one (1) liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. First-draw samples may be collected by the system or the system may allow residents to collect first-draw samples after instructing the residents of the sampling procedures specified in this subparagraph. To avoid problems of residents handling nitric acid, acidification of first-draw samples may be done up to fourteen (14) days after the sample is collected. After acidification to resolubilize the metals, the sample shall stand in the original container for the time specified in the approved EPA method, pursuant to section 19-13-B102(e)(7)(k) of the Regulations of Connecticut State Agencies, before the sample is analyzed.

(iii) Each service line sample shall be one(1) liter in volume and have stood motionless in the lead service line for at least six (6) hours. Lead service line samples shall be collected in one (1) of the following three (3) ways: at the tap after flushing the volume of water between the tap and the lead service line (the volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line); tapping directly into the lead service line; or if the sampling site is a building constructed as a single-family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.

(iv) A water system shall collect each first-draw tap sample from the same sampling site from which it collected a previous sample. If the water system cannot gain entry to a sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from another sampling site in its sampling pool as long as the new site meets the same targeting criteria, and is within reasonable proximity of the original site.

(v) A non-transient non-community water system, or a community water system whose operation mandates continuous daily flow, such as a prison or hospital, that

does not have enough taps that can supply first-draw samples, as defined in section 19-13-B102(a) of the Regulations of Connecticut State Agencies, shall notify the Department in writing when it substitutes non-first-draw samples, pursuant to section 19-13-B102(h)(5)(A)(vii) of the Regulations of Connecticut State Agencies. Such systems shall collect as many first-draw samples from appropriate taps as possible and identify sampling times and locations that would likely result in the longest standing time for the remaining sites.

(C) Number of samples. Water systems shall collect at least one (1) sample during each monitoring period specified in subparagraph (D) of this subdivision from the number of sites listed (“Standard Monitoring”) in the table in this subparagraph. A system conducting reduced monitoring under subparagraph (G) of this subdivision shall collect at least one (1) sample from the number of sites specified “Reduced Monitoring” in the table in this subparagraph during each monitoring period specified in subparagraph (G) of this subdivision. Such reduced monitoring sites shall be representative of the sites required for standard monitoring. The Department may specify sampling locations when a system is conducting reduced monitoring.

<i>System Size (Number of People Served)</i>	<i>Number of Sites Standard Moni- toring)</i>	<i>Number of Sites (Reduced Moni- toring)</i>
Greater than 100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
Less than or equal to 100	5	5

In the case of a consecutive public water system, the number of sampling sites shall be based on the total population of the consecutive system and the supplier’s system. The number of sites for each system shall then be apportioned according to the percentage of the total population served by each system.

(D) Initial tap sampling.

The first six (6) month monitoring period for small, medium-size and large systems shall begin on the following dates:

<i>System Size (Number People Served)</i>	<i>First Six (6) Month Monitoring Period Begins</i>
Greater than 50,000	January 1, 1992
3,301 to 50,000	July 1, 1992
Less than or equal to 3,300	July 1, 1993

All large systems shall monitor during two (2) consecutive six (6) month periods.

All small and medium-size systems shall monitor during each six (6) month monitoring period until: the system exceeds the lead or copper action level and is therefore required to implement the corrosion control treatment requirements under subsection (j)(7) of this section, in which case the system shall continue monitoring in accordance with subparagraph (E) of this subdivision, or the system meets the lead and copper action levels during two (2) consecutive six (6) month monitoring periods, in which case the system may reduce monitoring in accordance with subparagraph (G) of this subdivision.

(E) Monitoring after installation of corrosion control and source water treatment. Any large system that installs optimal corrosion control treatment pursuant to subsection (j)(7)(D)(iv) of this section shall monitor during two (2) consecutive six (6) month monitoring periods by the date specified in subsection (j)(7)(D)(v) of this section. Any small or medium-size system that installs optimal corrosion control treatment pursuant to subsection (j)(7)(E)(v) of this section shall monitor during two (2) consecutive six (6) month monitoring periods by the date specified in subsection (j)(7)(E)(vi) of this section. Any system that installs source water treatment pursuant to subsection (j)(9)(A)(iii) of this section shall monitor during two (2) consecutive six (6) month monitoring periods by the date specified in subsection (j)(9)(A)(iv) of this section.

(F) Monitoring after the department specifies water quality parameter values for optimal corrosion control.

After the department specifies the values for water quality control parameters under subsection (j)(8)(F) of this section, the system shall monitor during each subsequent six (6) month monitoring period, with the first monitoring period to begin on the date the department specifies the optimal values under subsection (j)(8)(F) of this section.

(G) Reduced monitoring.

(i) A small or medium-size water system that meets the lead and copper action levels during each of two (2) consecutive six (6) month monitoring periods may reduce the number of samples in accordance with subparagraph (c) of this subdivision, and reduce the frequency of sampling to once per year.

(ii) Any water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the department under subsection (j)(8)(F) of this section during each of two (2) consecutive six (6) month monitoring periods may reduce the frequency of monitoring to once per year and reduce the number of lead and copper samples in accordance with subparagraph (C) of this subdivision if it receives written approval from the department. The department shall review monitoring, treatment and other relevant information submitted by the water system in accordance with section 19-13-B102(h)(5) of the Regulations of Connecticut State Agencies and shall notify the system in writing, when it determines the system is eligible to commence reduced monitoring pursuant to this subclause. The department shall review, and where appropriate, revise its determination when the system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(iii) A small or medium-size water system that meets the lead and copper action levels during three (3) consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every three (3) years. Any water system that maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the department under subsection (j)(8)(F) of this section during three (3) consecutive years of monitoring may reduce the frequency of monitoring from annually to once every three (3) years if it receives written approval from the department. The department shall review monitoring, treatment, and other relevant information submitted by the water system in accordance with section 19-13-B102(h)(5) of the Regulations of Connecticut State Agencies, and shall notify the system in writing, when it determines the system is eligible to reduce the frequency of monitoring to once every three (3) years. The department shall review, and where appropriate, revise its determination when the

system submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(iv) A water system that reduces the number and frequency of sampling shall collect these samples from representative sites included in the pool of targeted sampling sites identified in subparagraph (A) of this subdivision. Systems sampling annually or less frequently shall conduct the lead and copper tap sampling during the months of June, July, August or September unless the department has approved a different sampling period in accordance with this subclause.

The Department, in its discretion, may approve a different period for conducting the lead and copper tap sampling for systems collecting a reduced number of samples. Such a period shall be no longer than four (4) consecutive months and shall represent a time of normal operation when the highest levels of lead are most likely to occur. For a non-transient non-community water system that does not operate during the months of June through September, and for which the period of normal operation when the highest levels of lead are most likely to occur is not known, the department shall designate a period that represents a time of normal operation for the system.

Systems monitoring annually, that have been collecting samples during the months of June through September and that receive department approval to alter their sample collection period under this subclause, shall collect their next round of samples during a time period that ends no later than twenty-one (21) months after the previous round of sampling. Systems monitoring once every three (3) calendar years that have been collecting samples during the months of June through September and that receive department approval to alter their sampling collection period under this subclause, shall collect their next round of samples during a time period that ends no later than forty-five (45) months after the previous round of sampling. Subsequent rounds of sampling shall be collected annually or once every three (3) calendar years, as required by this section.

(v) Any water system that demonstrates for two (2) consecutive six (6) month monitoring periods that the tap water lead level computed under section 19-13-B102(j)(6)(B)(iii) of the Regulations of Connecticut State Agencies is less than or equal to 0.005 mg/l and the tap water copper level computed under section 19-13-B102(j)(6)(B)(iii) of the Regulations of Connecticut State agencies is less than or equal to 0.65 mg/l may reduce the number of samples in accordance with section 19-13-B102(e)(8)(C) of the Regulations of Connecticut State Agencies and reduce the frequency of sampling to once every three (3) calendar years.

(vi) A small or medium-size water system subject to reduced monitoring that exceeds the lead or copper action level shall resume sampling in accordance with section 19-13-B102(e)(8)(F) of the Regulations of Connecticut State Agencies and collect the number of samples specified for standard monitoring under subparagraph (C) of this subdivision. Such system shall also conduct water quality parameter monitoring in accordance with subdivision (9) (B), (C) or (D) of this subsection (as appropriate) during the designated four (4) consecutive month monitoring period in which it exceeded the action level. Any such system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in section 19-13-B102(e)(8)(C) of the Regulations of Connecticut State Agencies after it has completed two (2) subsequent consecutive six (6) month rounds of monitoring that meet the criteria of section 19-13-B102(e)(8)(G)(i) of the Regulations of Connecticut State Agencies and may resume monitoring once every three (3) calendar years for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either section 19-13-B102(e)(8)(G)(iii) or (v) of the Regulations of Connecticut State Agencies.

(vii) Any water system subject to the reduced monitoring frequency that fails to operate, at or above the minimum value or within the range of values for the water quality parameters specified by the department under section 19-13-B102(j)(8)(F) of the Regulations of Connecticut State Agencies, for more than nine (9) days in any six (6) month period specified in section 19-13-B102(e)(9)(D) of the Regulations of Connecticut State Agencies, shall conduct tap water sampling for lead and copper at the frequency specified in section 19-13-B102(e)(8)(F) of the Regulations of Connecticut State Agencies, collect the number of samples specified for standard monitoring in section 19-13-B102(e)(8)(C) of the Regulations of Connecticut State Agencies and shall resume monitoring for water quality parameters within the distribution system in accordance with section 19-13-B102(e)(9)(D) of the Regulations of Connecticut State Agencies. Such a system may resume reduced monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:

(I) The system may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in section 19-13-B102(e)(8)(C) of the Regulations of Connecticut State Agencies after it has completed two (2) subsequent six (6) month rounds of monitoring that meet the criteria of section 19-13-B102(e)(8)(G)(ii) of the Regulations of Connecticut State Agencies and the system has received written approval from the department that it is appropriate to resume reduced monitoring on an annual frequency;

(II) The system may resume monitoring once every three (3) calendar years for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either section 19-13-B102(e)(8)(G)(iii) or (iv) of the Regulations of Connecticut State Agencies and the system has received written approval from the department that it is appropriate to resume monitoring once every three (3) calendar years; and

(III) The system may reduce the number of water quality parameter tap water samples required in accordance with section 19-13-B102(e)(9)(E)(i) of the Regulations of Connecticut State Agencies and the frequency with which it collects such samples in accordance with section 19-13-B102 (e)(9)(E)(ii) of the Regulations of Connecticut State Agencies. Such a system may not resume monitoring once every three (3) calendar years for water quality parameters at the tap until it demonstrates, in accordance with the requirements of section 19-13-B102(e)(9)(E)(ii) of the Regulations of Connecticut State Agencies, that it has re-qualified for monitoring once every three (3) calendar years.

(viii) Any water system subject to a reduced monitoring frequency under this subparagraph shall obtain the approval of the department in writing, pursuant to section 19-13-B102(d)(2) of the Regulations of Connecticut State Agencies, prior to any change in treatment or the addition of a new source. The department may require the system to resume routine sampling in accordance with subparagraph (F) of this subdivision and collect the number of samples specified for standard monitoring under section 19-13-B102(e)(8)(C) of the Regulations of Connecticut State Agencies or take other appropriate steps, such as increased water quality parameter monitoring or re-evaluation of its corrosion control treatment given the potentially different water quality considerations.

(H) Additional monitoring by systems. The results of any monitoring conducted in addition to the minimum requirements of this subsection shall be considered by the system and the department in making any determinations (i.e., calculating the 90th percentile lead or copper level) under this subsection.

(I) Invalidation of lead or copper tap water samples. A sample invalidated under this subparagraph does not count toward determining lead or copper 90th percentile levels under section 19-13-B102(j)(6)(B)(iii) of the Regulations of Connecticut State Agencies or toward meeting the minimum monitoring requirements of section 19-13-B102(e)(8)(C) of the Regulations of Connecticut State Agencies.

(i) The department may invalidate a lead or copper tap water sample if at least one of the following conditions is met:

(I) The laboratory establishes that improper sample analysis caused erroneous results;

(II) The department determines that the sample was taken from a site that did not meet the site selection criteria of this section;

(III) The sample container was damaged in transit;

(IV) There is substantial reason to believe that the sample was subject to tampering; or

(V) There is substantial reason to believe that the sample was collected improperly.

(ii) The system shall report the results of all samples to the department and all supporting documentation for samples the system believes should be invalidated.

(iii) To invalidate a sample under this subparagraph, the department shall document, in writing, the decision and the rationale for the decision. The department may not invalidate a sample solely on the grounds that a follow-up sample result is higher or lower than that of the original sample.

The water system shall collect replacement samples for any samples invalidated under this section if, after the invalidation of one or more samples, the system has too few samples to meet the minimum requirements of section 19-13-B102(e)(8)(C) of the Regulations of Connecticut State Agencies. Any such replacement samples shall be taken as soon as possible, but no later than twenty (20) days after the date the department invalidates the sample or by the end of the applicable monitoring period, whichever occurs later. Replacement samples taken after the end of the applicable monitoring period shall not also be used to meet the monitoring requirements of a subsequent monitoring period. The replacement samples shall be taken at the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.

(e)(9) Monitoring requirements for water quality parameters.

All large water systems and all small and medium-size systems that exceed the lead or copper action level shall monitor water quality parameters in addition to lead and copper in accordance with this subdivision. The requirements of this subdivision are summarized in the table at the end of this subdivision.

(A) General requirements.

(i) Sample collection methods.

Tap samples shall be representative of water quality throughout the distribution system taking into account the number of persons served, the different sources of water, the different treatment methods employed by the system, and seasonal variability. Tap sampling under this subdivision is not required to be conducted at taps targeted for lead and copper sampling under subdivision (8)(A)(i) of this subsection. Samples collected at the entry point(s) to the distribution system shall be from locations representative of each source after treatment. If a system draws water from more than one (1) source and the sources are combined before distribution, the system shall sample at an entry point to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).

(ii) Number of samples.

Systems shall collect two (2) tap samples for applicable water quality parameters during each monitoring period specified under subparagraphs (B) through (E) of this subdivision from the following number of sites.

<i>System Size (Number People Served) Parameters</i>	<i>Number of Sites For Water Quality</i>
Greater than 100,000	25
10,001-100,000	10
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
Less than or equal to 100	1

Systems shall collect two (2) samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in subparagraph (B) of this subdivision. During each monitoring period specified in subparagraphs (C) through (E) of this subdivision, systems shall collect one (1) sample for each applicable water quality parameter at each entry point to the distribution system.

(B) Initial sampling. All large water systems shall measure the applicable water quality parameters as specified in this subparagraph at taps and at each entry point to the distribution system during each six (6) month monitoring period specified in subdivision (8)(D) of this subsection. All small and medium-size systems shall measure the applicable water quality parameters at the locations specified in this subparagraph during each six (6) month monitoring period specified in subdivision (8)(D) of this subsection during which the system exceeds the lead or copper action level.

(i) Monitoring at taps shall include: pH; alkalinity; orthophosphate when an orthophosphate compound is used; orthophosphate and hydrolyzable phosphate when a condensed or blended phosphate is used; silica, when a silicate compound is used; calcium; conductivity; and water temperature.

(ii) At each entry point to the distribution system all of the applicable parameters listed in subparagraph (B)(i).

(C) Monitoring after installation of corrosion control. Any large system that installs optimal corrosion control treatment pursuant to subsection (j)(7)(D)(iv) of this section shall measure the water quality parameters at the locations and frequencies specified in this subparagraph during each six (6) month monitoring period specified in subdivision (8) (E) of this subsection. Any small or medium-size system that installs optimal corrosion control treatment shall conduct such monitoring during each six-month monitoring period specified in subdivision (8) (E) of this subsection in which the system exceeds the lead or copper action level.

(i) Monitoring at taps, two (2) samples for: pH; alkalinity; orthophosphate, when an inhibitor containing an orthophosphate compound is used; orthophosphate and hydrolyzable phosphate when an inhibitor containing condensed or blended phosphate compounds is used; silica, when an inhibitor containing a silicate compound is used; calcium, when calcium carbonate stabilization is used as part of corrosion control.

(ii) At each entry point to the distribution system, at least one (1) sample no less frequently than every two (2) weeks for: pH; when alkalinity is adjusted as part of

optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity, and the alkalinity concentration; and when a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate or orthophosphate and hydrolyzable phosphate or silica (whichever is applicable).

(D) Monitoring after the department specifies water quality parameter values for optimal corrosion control. After the department specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment under section 19-13-B102 (j)(8)(F) of the Regulations of Connecticut State Agencies, all large systems shall measure the applicable water quality parameters in accordance with subparagraph (C) of this subdivision and determine compliance with the requirements of section 19-13-B102(j)(8)(G) of the Regulations of Connecticut State Agencies every six (6) months with the first six (6) month period to begin on the date the department specifies the optimal values under section 19-13-B102(j)(8)(F) of the Regulations of Connecticut State Agencies. Any small or medium-size system shall conduct such monitoring during each six (6) month period specified in this subparagraph in which the system exceeds the lead or copper action level. For any such small and medium-size system that is on a reduced monitoring frequency pursuant to section 19-13-B102(e)(8)(G) of the Regulations of Connecticut State Agencies at the time of the action level exceedance, the end of the applicable monitoring period under this subparagraph shall coincide with the end of the applicable monitoring period under section 19-13-B102(e)(8)(G) of the Regulations of Connecticut State Agencies. Compliance with department-designated optimal water quality parameter values shall be determined as specified under section 19-13-B102(j)(8)(G) of the Regulations of Connecticut State Agencies.

(E) Reduced monitoring.

(i) Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of two (2) consecutive six (6) month monitoring periods under subparagraph (D) of this subdivision shall continue monitoring at the entry point(s) to the distribution system as specified in subparagraph (C) (ii) of this subdivision. Such system may collect two (2) tap samples for applicable water quality parameters from the following reduced number of sites during each six (6) month monitoring period.

<i>System Size (Number People Served)</i>	<i>Reduced Number of Sites For Water Quality Parameters</i>
Greater than 100,000	10
10,001 to 100,000	7
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
Less than or equal to 100	1

(ii) Any water system that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the department under section 19-13-B102(j)(8)(F) of the Regulations of Connecticut State Agencies during three (3) consecutive years of monitoring may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in this subparagraph from every six (6) months to annually. Any water system that maintains the range of values for the water quality parameters reflecting

optimal corrosion control treatment specified by the department under section 19-13-B102(j)(8)(F) of the Regulations of Connecticut State Agencies during three (3) consecutive years of annual monitoring under this paragraph may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subclause (i) of this subparagraph from annually to every three (3) years.

(iii) A water system may reduce the frequency with which it collects tap samples for applicable water quality parameters specified in subclause (i) of this subparagraph to every three (3) years if it demonstrates during two (2) consecutive monitoring periods that its tap water lead level at the 90th percentile is less than or equal to the PQL for lead of 0.005 milligrams per liter, that its tap water copper level at the 90th percentile is less than or equal to the PQL for copper of 0.65 mg/l, and that it also has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the department under section 19-13-B102(j)(8)(F) of the Regulations of Connecticut State Agencies.

(iv) A water system that conducts sampling annually shall collect these samples evenly throughout the year so as to reflect seasonal variability.

(v) Any water system subject to reduced monitoring frequency that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the department under section 19-13-B102(j)(8)(F) of the Regulations of Connecticut State Agencies for more than nine (9) days in any six (6) month period specified in section 19-13-B102(j)(8)(G) of the Regulations of Connecticut State Agencies shall resume distribution system tap water sampling for water quality parameters in accordance with the number and frequency requirements in subparagraph (D) of this subdivision, shall conduct tap water sampling for lead and copper at the frequency specified in section 19-13-B102(e)(8)(F) of the Regulations of Connecticut State Agencies, and shall collect the number of samples specified for standard monitoring in section 19-13-B102 (e)(8)(C) of the Regulations of Connecticut State Agencies. Such a system may resume annual monitoring for water quality parameters at the tap, at the reduced number of sites specified in subclause (i) of this subparagraph, after it has completed two (2) subsequent consecutive six (6) month rounds of monitoring that meet the criteria of subclause (I) of this subparagraph and may resume monitoring once every three (3) calendar years for water quality parameters at the tap at the reduced number of sites, after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either subclause (ii) or (iii) of this subparagraph.

(F) Additional monitoring by systems. The results of any monitoring conducted in addition to the minimum requirements of this subdivision shall be considered by the system and the department in making any determinations (i.e. determining concentrations of water quality parameters) under this subdivision or section 19-13-B102 (j)(8) of the Regulations of Connecticut State Agencies.

SUMMARY OF MONITORING REQUIREMENTS FOR WATER QUALITY PARAMETERS⁽¹⁾

<i>Monitoring Period</i>	<i>Parameters⁽²⁾</i>	<i>Location</i>	<i>Frequency</i>
Initial Monitoring	pH, alkalinity, orthophosphate or silica ⁽³⁾ calcium, conductivity, system, temperature	Taps and at entry points to distribution system	Every six (6) months
After Installation of Corrosion Control	pH, alkalinity, orthophosphate or silica, ⁽³⁾ calcium ⁽⁴⁾	Taps	Every six (6) months
	pH, alkalinity dosage rate concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁽⁵⁾	Entry point(s) to distribution system	No less frequently than every two (2) weeks
After Department Specifies Parameter Values for Optimal Corrosion Control	pH, alkalinity, orthophosphate or silica, ⁽³⁾ calcium ⁽⁴⁾	Taps	Every six (6) months
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁽⁵⁾	Entry point(s) to distribution system	No less frequently than every two (2) weeks
Reduced Monitoring	pH, alkalinity, orthophosphate or silica, ⁽³⁾ calcium ⁽⁴⁾	Taps	Every six (6) months, annually ⁽⁶⁾ , or every three (3) years ⁽⁷⁾ , at reduced number of sites
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual ⁽⁵⁾	Entry point(s) to distribution system	No less frequently than every two (2) weeks

Notes:

⁽¹⁾ Table is for illustrative purposes. Consult the text of this section for detailed regulatory requirements.

⁽²⁾ Small and medium-size systems shall monitor for water quality parameters only during monitoring periods in which the system exceeds the lead or copper action level.

⁽³⁾ Orthophosphate shall be measured only when an inhibitor containing phosphate compound is used. Silica shall be measured only when an inhibitor containing silicate compound is used.

⁽⁴⁾ Calcium shall be measured only when calcium carbonate stabilization is used as part of corrosion control.

⁽⁵⁾ Inhibitor dosage rates and inhibitor residual concentrations (orthophosphate or silica) shall be measured only when an inhibitor is used.

⁽⁶⁾ A water system may reduce frequency of monitoring for water quality parameters at the tap, from every six (6) months to annually, if it has maintained the range of values for water quality parameters reflecting optimal corrosion control during three (3) consecutive years of monitoring.

⁽⁷⁾ A water system may further reduce the frequency of monitoring for water quality parameters at the tap, from annually to once every three (3) years, if it has maintained the range of values for water quality parameters reflecting optimal corrosion control during three (3) consecutive years of annual monitoring. Water system may reduce monitoring from every six (6) months to once every three (3) calendar years for water quality parameters at the tap if it has maintained all of the following 90th percentile lead levels less than or equal to 0.005 mg/l, 90th percentile copper levels less than or equal to 0.65 mg/l, and the range of water quality parameters designated by the department under section 19-13-B102(j)(8)(F) of the Regulations of Connecticut State Agencies, as representing optimal corrosion control, during two (2) consecutive six (6) month monitoring periods.

(e)(10) Monitoring requirements for lead and copper in source water.

(A) Sample location, collection methods, and number of samples.

(i) A water system that fails to meet the lead or copper action level on the basis of tap samples collected in accordance with subdivision (8) of this subsection shall collect lead and copper source water samples in accordance with the following requirements regarding sample location, number of samples, and collection methods:

Groundwater systems shall take a minimum of one sample, at every point of entry to the distribution system which is representative of each active source of supply after treatment, unless conditions make another location more representative of each source or treatment plant. Surface water systems and systems with a combination of active surface and groundwater sources shall take a minimum of one sample, at every point of entry to the distribution system after any application of treatment or in the distribution system at a point which is representative of each active source after treatment, unless conditions make another location more representative of each source or treatment plant.

If a system draws water from more than one source and the sources are combined before distribution, the system shall sample at a point of entry to the distribution system during periods of normal operating conditions (i.e., when water is representative of all sources being used).

(ii) Where the results of sampling exceed the maximum permissible source water levels established under subsection (j)(9)(B)(iv) of this section, the department may require that one (1) additional sample be collected as soon as possible after the initial sample was taken (but not to exceed two (2) weeks) at the same sampling point. If a department-required confirmation sample is taken for lead or copper, then the results of the initial and confirmation sample shall be averaged in determining compliance with the department-specified maximum permissible levels. Any sample value below the detection limit shall be considered to be zero. Any value above the detection limit but below the PQL shall be considered as either the measured value or one-half the PQL.

(B) Monitoring frequency after system exceeds tap water action level. Any system which exceeds the lead or copper action level at the tap shall collect one source

water sample from each entry point to the distribution system within six (6) months after the end of the tap monitoring period, pursuant to sections 19-13-B102(e)(8)(D) through (G) of the Regulations of Connecticut State Agencies, in which the exceedance occurred.

(C) Monitoring frequency after installation of source water treatment. Any system that installs source water treatment pursuant to subsection (j)(9)(A)(iii) of this section, shall collect an additional source water sample from each entry point to the distribution system during two (2) consecutive six (6) month monitoring periods by the deadline specified in subsection (j)(9)(A)(iv) of this section.

(D) Monitoring frequency after the department specifies maximum permissible source water levels or determines that source water treatment is not needed.

(i) A system shall monitor at the frequency specified in this subparagraph in cases where the department specifies maximum permissible source water levels under subsection (j)(9)(B)(iv) of this section or determines that the system is not required to install source water treatment under subsection (j)(9)(B)(ii) of this section. A water system using only groundwater shall collect samples once during the three-year compliance period in effect when the applicable department determination under this subparagraph is made. Such systems shall collect samples once during each subsequent compliance period. A water system using surface water or a combination of surface water and groundwater shall collect samples once during each year, the first annual monitoring period to begin on the date on which the applicable department determination is made under this subparagraph.

(ii) A system is not required to conduct source water sampling for lead or copper if the system meets the action level for the specific contaminant in tap water samples during the entire source water sampling period applicable to the system under this subparagraph.

(11) Monitoring requirements for disinfection byproducts, residuals, and precursors

(A) Compliance dates and applicability

(i) Chlorine, chloramines, and ozone

CWS or NTNC that uses at least one of these chemicals in any part of the treatment process, uses surface water or GWUDI as a source in whole or in part and serves at least 10,000 persons shall comply with the requirements of this subdivision. Any other CWS and NTNC that uses at least one of these chemicals in any part of the treatment process shall comply with the requirements of this subdivision beginning January 1, 2004. Additionally, any CWS or NTNC that purchases water from a system that uses at least one of these chemicals and is not part of the supplying system's monitoring plan, developed in accordance with subsection 19-13-B102(e)(11)(F), shall comply with the requirements of this subdivision if it serves at least 10,000 persons, and beginning January 1, 2004 if it serves fewer than 10,000 persons or uses only groundwater not under the direct influence of surface water.

(ii) Chlorine Dioxide

Any public water system that uses chlorine dioxide as a disinfectant or oxidant, or purchases water from a system that uses chlorine dioxide and is not part of the supplying system's monitoring plan developed in accordance with section 19-13-B102(e)(11)(F), shall comply with any requirements for chlorine dioxide in this subdivision if it serves at least 10,000 persons, or beginning January 1, 2004 if it serves fewer than 10,000 persons.

(iii) A system that is installing granular activated carbon or membrane technology to comply with this subdivision may apply to the department for an extension of up to twenty-four (24) months past the dates in subclauses (i) and (ii) of this

subparagraph but not later than December 31, 2003. In granting the extension, the department shall set a schedule for compliance and may specify any interim measures that the system shall take.

(B) General Requirements

(i) A system that is required to monitor for disinfection byproducts in accordance with subparagraph (A) of this subdivision shall test for the following disinfectant residuals and disinfection byproducts according to the requirements of this subdivision.

DISINFECTANTS AND THEIR LIMITS

<i>Disinfectant Residual</i>	<i>MRDLG (mg/l)</i>	<i>MRDL (mg/l)</i>	<i>Compliance based on</i>
Chlorine	4 (as Cl_2)	4.0 (as Cl_2)	Annual average ⁽¹⁾
Chloramine	4 (as Cl_2)	4.0 (as Cl_2)	Annual average ⁽¹⁾
Chlorine Dioxide	0.8 (as ClO_2)	0.8 (as ClO_2)	Consecutive daily samples ⁽²⁾

NOTES:

⁽¹⁾ See subparagraph (G)(vii) of this subdivision.

⁽²⁾ See subparagraph (G)(viii) of this subdivision.

DISINFECTION BYPRODUCTS AND THEIR LIMITS

<i>Disinfection Byproducts</i>	<i>MCLG (mg/l)</i>	<i>MCL (mg/l)</i>	<i>Compliance based on</i>
Total trihalomethanes	N/A	0.080	Running annual average
Bromodichloromethane	zero	*	
Dibromochloromethane	0.06	*	
Bromoform	zero	*	
Chloroform	not available	*	
Haloacetic acids (five)	N/A	0.060	
-dichloroacetic acid	zero	*	
-trichloroacetic acid	0.3	*	
Bromate	zero	0.010	3 sample set
Chlorite	0.8	1.0	

N/A — Not applicable.

* — No individual MCL for TTHM and HAA5 constituents

(ii) A system shall take all samples during normal operating conditions.

(iii) A system may use previously collected data to qualify for reduced monitoring if the data meets the location and frequency requirements of this subdivision.

(iv) A system shall use only the analytical method(s) specified in 40 CFR 141.131 for monitoring under this subdivision.

(v) All samples, including those described in subclause (iii), shall be analyzed by a department approved laboratory pursuant to section 19-13-B102(g) of the Regulations of Connecticut State Agencies. The department may grant an exemption, in writing, for the daily chlorite samples when the chlorite analysis is conducted by a certified treatment operator using a method approved by the department.

(C) Disinfection byproducts

(i) Routine monitoring for TTHM and HAA5

A system shall conduct routine monitoring at the locations and frequencies indicated in the following table:

<i>Type of System</i>	<i>Minimum Monitoring Frequency⁽¹⁾</i>	<i>Sample Location in the Distribution System⁽²⁾</i>
A system using surface water or GWUDI in whole or in part and serving 10,000 or more persons	Four (4) samples per quarter per treatment plant	At least 25% of all samples collected each quarter at locations representing maximum residence time. Remaining samples taken at locations representative of at least average residence time in the distribution system and representing the entire distribution system.
A system using surface water or GWUDI in whole or in part and serving fewer than 10,000 persons	One (1) sample per quarter per treatment plant	Location representing maximum residence time
A system using only groundwater not under the direct influence of surface water and serving 10,000 or more persons	One (1) sample per quarter per treatment plant	Location representing maximum residence time
A system using only groundwater not under the direct influence of surface water and serving fewer than 10,000 persons	One (1) sample per year per treatment plant during the third calendar quarter	Location representing maximum residence time ⁽³⁾

NOTES:

⁽¹⁾ Multiple wells drawing water from a single aquifer may be considered one treatment plant for determining the minimum number of samples required, with written approval from the department.

⁽²⁾ If a system elects to sample more frequently than the minimum required, at least twenty-five (25) percent of all samples collected each quarter, including those taken in excess of the required frequency, shall be taken at locations that represent the maximum residence time of the water in the distribution system. The remaining samples shall be taken at locations representative of at least average residence time in the distribution system.

⁽³⁾ If the sample, or average of annual samples if more than one sample is taken, exceeds the MCL, the system shall increase monitoring to one sample per treatment plant per quarter, taken at a point reflecting the maximum residence time in the distribution system. Systems on increased monitoring may return to routine monitoring if, after at least one year of monitoring, their TTHM annual average is 0.060 mg/l and HAA5 annual average is <0.045 mg/l and the system is granted approval by the department in writing.

(ii) Reduced monitoring for TTHM and HAA5

A system may reduce monitoring in accordance with the following table with the written approval of the department:

<i>Type of System</i>	<i>Criteria for Monitoring Reduction⁽¹⁾</i>	<i>Minimum Monitoring Frequency</i>	<i>Sample Location in the Distribution System</i>
A system using surface water or GWUDI in whole or in part and serving at least 10,000 persons	Source water annual average TOC level, before any treatment, <4.0 mg/l; TTHM annual average <0.040 mg/l; and HAA5 annual average <0.030 mg/l	One (1) sample per quarter per treatment plant	Location representing maximum residence time
A system using surface water or GWUDI in whole or in part and serving fewer than 10,000 persons	Source water annual average TOC level, before any treatment, <4.0 mg/l; TTHM annual average <0.040 mg/l; and HAA5 annual average <0.030 mg/l	One (1) sample per year per treatment plant during the third calendar quarter	Location representing maximum residence time
A system using only groundwater not under the direct influence of surface water and serving at least 10,000 persons	TTHM annual average <0.040 mg/l; and HAA5 annual average <0.030 mg/l	One (1) sample per year per treatment plant during the third calendar quarter	Location representing maximum residence time
A system using only groundwater not under the direct influence of surface water and serving fewer than 10,000 persons	TTHM annual average <0.040 mg/l; and HAA5 annual average <0.030 mg/l ⁽²⁾	One (1) sample every three (3) years per treatment plant during the third calendar quarter ⁽³⁾	Location representing maximum residence time

NOTES:

- (1) A system shall have monitored for at least one (1) year.
- (2) Averages for two (2) consecutive years, or TTHM annual average <0.020 mg/l and HAA5 annual average <0.015 mg/l for one year.
- (3) Three (3) year cycle begins January 1 following quarter in which system qualifies for reduced monitoring.

A system on a reduced monitoring schedule may remain on that reduced schedule as long as the average of all samples taken in the year (for systems which shall monitor quarterly) or the result of the sample (for systems which shall monitor no more frequently than annually) is no more than 0.060 mg/l and 0.045 mg/l for TTHM and HAA5, respectively. Systems that do not meet these levels shall resume routine monitoring in the quarter immediately following the quarter in which the system exceeds either of these levels. For a system using only groundwater not under the direct influence of surface water and serving fewer than 10,000 persons, if either the TTHM annual average is >0.080 mg/l or the HAA5 annual average is >0.060 mg/l, the system shall begin increased monitoring, as indicated in section 19-13-B102(e)(11)(C)(i), in the quarter immediately following the monitoring period in which the system exceeds 0.080 mg/l or 0.060 mg/l for TTHM or HAA5 respectively.

(iii) Routine monitoring for chlorite

A system using chlorine dioxide for disinfection or oxidation, shall conduct monitoring for chlorite. The system shall take daily chlorite samples at the entrance to the distribution system and shall also take a three (3) sample set for chlorite each month in the distribution system. The system shall take one sample at each of the following locations: near the first customer, at a location representative of average residence time and at a location reflecting maximum residence time in the distribution system. Any additional routine sampling shall be conducted in the same manner (as three-sample sets, at the specified locations). The system may use the results of additional monitoring conducted according to subclause (iv) of this subparagraph to meet their monthly requirement.

(iv) Additional monitoring for chlorite

On each day following a routine sample monitoring result that exceeds the chlorite MCL at the entrance to the distribution system, the system is required to take three (3) chlorite distribution system samples at the following locations: as close to the first customer as possible, in a location representative of average residence time and as close to the end of the distribution system as possible (reflecting maximum residence time in the distribution system).

(v) Reduced monitoring for chlorite

Routine chlorite monitoring at the entrance to the distribution system may not be reduced. Chlorite monitoring in the distribution system may be reduced to one three (3) sample set per quarter after one year of monitoring where no routine individual chlorite sample taken in the distribution system has exceeded the chlorite MCL and the system has not been required to conduct additional monitoring in accordance with subclause (iv) of this subparagraph. The system may remain on the reduced monitoring schedule until (1) any of the three (3) individual chlorite samples taken quarterly in the distribution system exceeds the chlorite MCL; or (2) the system is required to conduct additional monitoring according to subclause (iv) of this subparagraph, at which time the system shall revert to routine monitoring.

(vi) Routine monitoring for bromate

A system using ozone in any part of the treatment process shall take one bromate sample each month at the entrance to the distribution system for each treatment plant in the system using ozone.

(vii) Reduced monitoring for bromate

A system required to analyze for bromate may reduce monitoring from monthly to once per quarter, if the system demonstrates that the average source water bromide concentration is less than 0.05 mg/l based upon representative monthly bromide measurements for one year. The system may remain on reduced bromate monitoring until the running annual average source water bromide concentration, computed quarterly, is equal to or greater than 0.05 mg/l based upon representative monthly measurements. The system shall continue bromide monitoring to remain on reduced bromate monitoring. If the running annual average source water bromide concentration is equal to or greater than 0.05 mg/l, the system shall resume routine monitoring for bromate in accordance with subclause (vi) of this subparagraph. Public water systems that purchase water from systems that are eligible for reduced bromate monitoring are also eligible for reduced bromate monitoring.

(viii) A system required to comply with this subdivision shall determine their minimum monitoring frequency for disinfection byproducts using:

(I) Their own sources of water, if any, as well as each seller's source(s) of water to determine if they use surface water or GWUDI, in whole or in part, or if they use only groundwater not under the direct influence of surface water;

(II) Their own population, without considering the population of any system that purchases water from or sells water to their system; and

(III) A sum for the number of treatment plants calculated as the number of treatment plants in their own system plus one (1) for each applicable system that sells water to their system.

(D) Disinfectant residuals

(i) Routine monitoring for chlorine and chloramines

CWS and NTNC that uses chlorine or chloramines in any part of the treatment process shall measure the residual disinfectant level in the distribution system, at the same point in the distribution system and at the same time as total coliforms are sampled in accordance with subdivision (7) of this subsection. Surface water or GWUDI systems may use the results of residual disinfectant concentration sampling conducted under 40 CFR 141.74(c)(3)(i) in lieu of taking separate samples. Monitoring may not be reduced.

(ii) Routine monitoring for chlorine dioxide

A system using chlorine dioxide for disinfection or oxidation shall take daily chlorine dioxide samples at the entrance to the distribution system. For any daily sample that exceeds the MRDL, the system shall take chlorine dioxide samples in the distribution system the following day at the locations required by subclause (iii) of this subparagraph, in addition to the sample required at the entrance to the distribution system. Systems that purchase water from a system that is required to conduct additional monitoring shall also comply with subclause (iii) of this subparagraph. Routine monitoring may not be reduced.

(iii) Additional monitoring for chlorine dioxide

On each day following a routine sample monitoring result that exceeds the MRDL, the system shall take three (3) chlorine dioxide distribution system samples. If chlorine dioxide or chloramines are used to maintain a disinfectant residual in the distribution system, or if chlorine is used to maintain a disinfectant residual in the distribution system and there are no disinfection addition points after the entrance

to the distribution system (i.e., no booster chlorination), the system shall take three (3) samples as close to the first customer as possible, at intervals of at least six (6) hours. If chlorine is used to maintain a disinfectant residual in the distribution system and there are one or more disinfection addition points after the entrance to the distribution system (i.e., booster chlorination), the system shall take one sample at each of the following locations: as close to the first customer as possible, in a location representative of average residence time, and as close to the end of the distribution system as possible (reflecting maximum residence time in the distribution system).

(E) Disinfection byproduct precursors

(i) Routine monitoring

A surface water or GWUDI system, which uses conventional treatment, shall monitor each treatment plant for TOC, no later than the point of combined filter effluent turbidity monitoring and representative of the treated water. The system shall also monitor for TOC in the source water, prior to any treatment, at the same time as monitoring for TOC in the treated water. These samples (source water and treated water) are referred to as paired samples. At the same time as the source water sample is taken, all systems shall monitor for alkalinity in the source water prior to any treatment. System shall take one paired sample and one source water alkalinity sample each month for each plant, at a time representative of normal operating conditions and influent water quality.

(ii) Reduced monitoring

A Surface water or GWUDI system with an average treated water TOC of less than 2.0 mg/l for two consecutive years, or less than 1.0 mg/l for one year, may reduce monitoring for both TOC and alkalinity to one paired sample and one source water alkalinity sample for Each plant for each quarter. The system shall revert to routine monitoring in the month following the quarter when the annual average treated water TOC is 2.0 mg/l or greater.

(F) Monitoring plans

Each system required to monitor under this subdivision shall develop and implement a monitoring plan. The system shall maintain the plan and make it available for inspection by the department and the general public no later than thirty (30) days following the applicable compliance dates in subparagraph (a) of this subdivision. Any surface water or GWUDI system serving more than 1000 persons shall submit a copy of the monitoring plan to the department no later than the date of the first report required under section 19-13-B102(h)(7) of the Regulations of Connecticut State Agencies. The department may also require any other system to submit a monitoring plan. After review, the department may require changes in any plan elements. Failure by a system to monitor in accordance with its monitoring plan is a monitoring violation. The plan shall include the following elements:

(i) Specific locations and schedules for collecting samples for any parameters included in this subdivision. Sample locations that represent a point of average or maximum residence time for multiple treatment plants may be used to satisfy the requirements of subparagraph (C) of this subdivision for each applicable treatment plant, with the department's written approval; and

(ii) How the system will calculate compliance with MCL, MRDL, and treatment techniques.

(G) Compliance

(i) Where compliance is based on a running annual average of monthly or quarterly samples or averages and the system fails to monitor for TTHM, HAA5, or bromate,

this failure to monitor will be treated as a monitoring violation for the entire period covered by the annual average. Where compliance is based on a running annual average of monthly or quarterly samples or averages and the system's failure to monitor makes it impossible to determine compliance with MRDL for chlorine and chloramines, this failure to monitor will be treated as a monitoring violation for the entire period covered by the annual average.

(ii) All samples taken and analyzed under the provisions of this subdivision shall be included in determining compliance, even if that number is greater than the minimum required.

(iii) If, during the first year of monitoring, any individual quarter's average will cause the running annual average of that system to exceed the MCL, the system is out of compliance at the end of that quarter.

(iv) TTHM and HAA5

For a system monitoring quarterly, compliance with MCL shall be based on a running annual average, computed quarterly, of quarterly averages of all samples collected by the system as prescribed by this subdivision. If a system fails to complete four (4) consecutive quarters of monitoring, compliance with the MCL for the last four (4) quarter compliance period shall be based on an average of the available data.

For a system monitoring less frequently than quarterly, the system shall demonstrate MCL compliance if the average of samples taken under the provisions of section 19-13-B102(e)(11)(C)(i) do not exceed any MCL. If the average of these samples exceeds the MCL, the system shall increase monitoring to once each quarter for each treatment plant and such a system is not in violation of the MCL until it has completed one (1) year of quarterly monitoring, unless the result of fewer than four (4) quarters of monitoring will cause the running annual average to exceed the MCL, in which case the system is in violation at the end of that quarter. Systems required to increase monitoring frequency to quarterly monitoring shall calculate compliance by including the sample which triggered the increased monitoring plus the following three (3) quarters of monitoring.

If the running annual arithmetic average of quarterly averages covering any consecutive four (4) quarter period exceeds the MCL, the system is in violation of the MCL.

(v) Bromate

Compliance shall be based on a running annual average, computed quarterly, of monthly samples (or, for months in which the system takes more than one sample, the average of all samples taken during the month) collected by the system as prescribed by section 19-13-B102(e)(11)(C) of the Regulations of Connecticut State Agencies. If the average of samples covering any consecutive four-quarter period exceeds the MCL, the system is in violation of the MCL. If a system fails to complete twelve (12) consecutive months' monitoring, compliance with the MCL for the last four-quarter compliance period shall be based on an average of the available data.

(vi) Chlorite

Compliance shall be based on an arithmetic average of each three-sample set taken in the distribution system as prescribed by sections 19-13-B102(e)(11)(C)(iii) and (e)(11)(C)(iv) of the Regulations of Connecticut State Agencies. If the arithmetic average of any three (3) sample set exceeds the MCL, the system is in violation of the MCL.

(vii) Chlorine and chloramines

Compliance shall be based on a running annual average, computed quarterly, of monthly averages of all samples collected by the system under subparagraph (D)

of this subdivision. If the average of quarterly averages covering any consecutive four (4) quarter period exceeds the MRDL, the system is in violation of the MRDL.

In cases where systems switch between the use of chlorine and chloramines for residual disinfection during the year, compliance shall be determined by including together all monitoring results of both chlorine and chloramines in calculating compliance. Reports submitted pursuant to section 19-13-B102(h)(7) of the Regulations of Connecticut State Agencies shall clearly indicate which residual disinfectant was analyzed for each sample.

Notwithstanding the MRDL in subparagraph (B) of this subdivision, systems may increase residual disinfectant levels in the distribution system of chlorine or chloramines, but not chlorine dioxide, to a level and for a time necessary to protect public health, to address specific microbiological contamination problems caused by circumstances such as, including but not limited to, distribution line breaks, storm run-off events, source water contamination events, or cross-connection events.

(viii) Chlorine dioxide

Tier 1 notice. Compliance shall be based on consecutive daily samples collected by the system under subparagraph (D) of this subdivision. If any daily sample taken at the entrance to the distribution system exceeds the MRDL and, on the following day, one (or more) of the three (3) samples taken in the distribution system exceed the MRDL, the system is in violation of the MRDL and shall take immediate corrective action to lower the level of chlorine dioxide below the MRDL and shall notify the public pursuant to the procedures for a tier 1 notice in section 19-13-B102(i)(1) of the Regulations of Connecticut State Agencies. Failure to take samples in the distribution system the day following an exceedance of the chlorine dioxide MRDL at the entrance to the distribution system will also be considered an MRDL violation and the system shall notify the public of the violation in accordance with the procedures for tier 1 notices in section 19-13-B102(i)(1) of the Regulations of Connecticut State Agencies.

Tier 2 notice. Compliance shall be based on consecutive daily samples collected by the system under subparagraph (D) of this subdivision. If any two (2) consecutive daily samples taken at the entrance to the distribution system exceed the MRDL and all distribution system samples taken are below the MRDL, the system is in violation of the MRDL and shall take corrective action to lower the level of chlorine dioxide below the MRDL at the point of sampling and will notify the public pursuant to the procedures for a tier 2 notice in section 19-13-B102(i)(2) of the Regulations of Connecticut State Agencies. Failure to monitor at the entrance to the distribution system the day following an exceedance of the chlorine dioxide MRDL at the entrance to the distribution system is also an MRDL violation and the system shall notify the public of the violation in accordance with the procedures for tier 2 notice in section 19-13-B102(i)(2) of the Regulations of Connecticut State Agencies.

(ix) Disinfection byproduct precursors

Compliance shall be determined as specified by section 19-13-B102 (j)(11) of the Regulations of Connecticut State Agencies. Systems may begin monitoring to determine whether Step 1 TOC removals can be met twelve (12) months prior to the compliance date for the system. This monitoring is not required and failure to monitor during this period is not a violation. However, any system that does not monitor during this period, and then determines in the first twelve (12) months after the compliance date that it is not able to meet the Step 1 requirements in section 19-13-B102(j)(11)(B)(i) of the Regulations of Connecticut State Agencies and shall therefore apply for alternate minimum TOC removal (Step 2) requirements, is

not eligible for retroactive approval of alternate minimum TOC removal (Step 2) requirements as allowed pursuant to section 19-13-B102 (j)(11)(B)(ii) of the Regulations of Connecticut State Agencies and is in violation. Systems may apply for alternate minimum TOC removal (Step 2) requirements any time after the compliance date. For systems required to meet step 1 TOC removals, if the value calculated under Section 19-13-B102(j)(11)(C)(iv) of the Regulations of Connecticut State Agencies is less than 1.00, the system is in violation of the treatment technique requirements.

(f) Protection of distribution system.

(1) All service connections shall have a water pressure at the main of at least 25 psi under normal conditions. Where pressure is normally less than 25 psi, special provision as approved by the department, shall be made to furnish adequate service to the consumer.

(2) Each public water system which serves water to any of the consumer premises listed in subparagraph (a) of this subdivision shall report the following information to the Department by March 1 of each year covering the preceding calendar year, or upon notification by the department.

(A) A list of all consumer premises where the following categories of concern are known to exist:

(1) Any water supply source other than that of the public water system is known to exist.

(2) Toxic or objectionable chemical or biological substances are used in water solution on public, commercial or industrial premises.

(3) Water pressure is raised by pumping on other than residential premises above that furnished by the supplier.

(4) There is a water storage tank, public swimming pool or water filter, for other than residential use.

(5) There is known to be a sprinkler system for either fire protection or irrigation.

This list shall identify the category or categories of concern for each premise listed.

(B) Date of last inspection of each consumer premises listed in item (A). Also, the number of violations detected of the Public Health Code regulations relating to water distribution systems, and the status of correction of these violations. Listings under item (A)(2) shall be inspected at least once each year and the remaining items shall be inspected at least once every five years. At premises where the public water system has determined a reduced pressure principle backflow preventer, double check valve assembly or pressure vacuum breaker is required, the type(s) of device(s) shall be specified and a summary of test results shall be included.

(3) Each public water system which serves water to any of the consumer premises listed in subdivision (2)(a) of this subsection shall have those premises inspected for cross connections by a person who has met the requirements of section 25-32-11(h) of the Regulations of Connecticut State Agencies.

(4) Each public water system which does not serve water to any of the consumer premises listed in subdivision (2)(a) of this subsection shall verify to the department that it does not serve water to any of those premises. The system shall provide such verification on a form provided by the department by March 1, 2002, and every five years thereafter.

(5) Finished water storage tanks, basins and clearwells.

(A) All finished water storage tanks, basins and clearwells connected to a public water distribution system shall be constructed and located so as to adequately protect the water from contamination. Finished water storage tanks, basins and clearwells

shall be properly constructed in a sanitary manner to prevent stormwater and precipitation from entering; and vents and overflows shall be provided and suitably protected and screened to prevent entry of insects, birds or other foreign matter. Overflow pipes shall not be directly connected to sanitary sewers or to storm drainage systems.

(B) In-ground finished water clearwells, basins or tanks shall be at least fifty feet from any part of the nearest subsurface sewage disposal system and twenty-five feet from the nearest watercourse or storm drain or other source of pollution. They shall be at least fifty feet from the nearest sanitary sewer unless the sewer is constructed in accordance with the technical standards for subsurface sewage disposal systems pursuant to section 19-13-B103d of the Regulations of Connecticut State Agencies, in which case it may be no closer than twenty-five (25) feet. Exemptions may be sought for existing structures which do not conform to these requirements.

(C) All atmospheric finished water storage tanks, basins and clearwells shall be inspected at a minimum of once every ten years for sanitary conditions and structural integrity. The inspection report shall be retained for reference and submitted to the department upon request.

(D) Uncovered finished water clearwells, tanks and basins are prohibited.

(6) An annual distribution system flushing program shall be conducted to maintain the distribution system free from excessive accumulation of sediment, organic growths, products of corrosion and erosion, and other extraneous matter. The program shall be made available to the department upon request.

(g) **Laboratory and operating tests.** The water samples taken to conform with the monitoring requirements of these regulations must be analyzed and reported to the public water system by a laboratory approved by the department for the parameters tested. Laboratory techniques shall conform to those approved by the federal environmental protection agency. The department may grant an exemption from this requirement in writing for chlorine, pH, temperature, turbidity, fluoride and color when the analysis is conducted by a certified treatment operator using a method approved by the department. Continuous analyzers may be used provided the instruments used are approved by the department and are maintained by a certified treatment plant operator or technical personnel employed by an environmental laboratory approved by the department under section 25-40 of the Connecticut General Statutes.

(h) **Reporting of tests.**

(1) A system that has exceeded the MCL for total coliforms shall report the violation to the department and the local director of health of each city, town, borough, or district served by the system no later than the end of the next business day after it learns of the violation, and notify the public in accordance with subsection (i) of this section.

(2) A system that has failed to comply with a monitoring requirement, pursuant to subsections 19-13-B102 (e) (6) and (e) (7) of the Regulations of Connecticut State Agencies, shall report the monitoring violation to the department within ten (10) days after the system discovers the violation, and notify the public in accordance with subsection (i) of this section.

(3) Except where a different reporting period is specified in this section, the supplier of water must report to the department and the local director of health of each city, town, borough, or district served by the system within forty-eight (48) hours the failure to comply with any established MCL.

(4) The system shall ensure that the department receives a report no later than nine (9) calendar days following the end of each month. The report shall be in a

format and manner prescribed by the department and shall contain the results of required samples that are collected during the month in compliance with Section 19-13-B102 of the Regulations of Connecticut State Agencies.

(5) Lead and copper. All water systems shall report all of the following information to the department.

(A) Reporting requirements for tap water monitoring for lead and copper and for water quality parameter monitoring. Unless the department has specified a more frequent reporting requirement, a water system shall report the information specified in this subparagraph for all tap water samples specified in section 19-13-B102 (e)(8) of the Regulations of Connecticut State Agencies and for all water quality parameter samples specified in section 19-13-B102 (e)(9) of the Regulations of Connecticut State Agencies no later than nine (9) calendar days following the end of each applicable monitoring period specified in sections 19-13-B102(e)(8) and 19-13-B102(e)(9) of the Regulations of Connecticut State Agencies:

(i) The results of all tap samples for lead and copper including the location of each site and the criteria under subsection (e)(8)(A) of this section under which the site was selected for the system's sampling pool; upon request of the department, a certification that each first-draw sample collected by the water system is one (1) liter in volume and, has stood motionless in the service line, or in the interior plumbing of a sampling site, for at least six (6) hours; where residents collected samples, a certification that each tap sample collected by the residents was taken after the water system informed them of proper sampling procedures specified in section 19-13-B102(e)(8)(B)(ii) of the Regulations of Connecticut State Agencies;

(ii) Documentation for each tap water lead or copper sample for which the water system requests invalidation pursuant to section 19-13-B102 (e)(8)(I)(i) of the Regulations of Connecticut State Agencies;

(iii) The 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period (calculated in accordance with section 19-13-B102(j)(6)(B)(iii) of the Regulations of Connecticut State Agencies);

(iv) With the exception of initial tap sampling conducted pursuant to section 19-13-B102(e)(8)(D) of the Regulations of Connecticut State Agencies, the system shall designate any site which was not sampled during previous monitoring periods, and include an explanation of why sampling sites have changed;

(v) The results of all tap samples for pH, and where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected under sections 19-13-B102(e)(9)(B) through (E) of the Regulations of Connecticut State Agencies;

(vi) The results of all samples collected at the entry point(s) to the distribution system for applicable water quality parameters under sections 19-13-B102(e)(9)(B) through (E) of the Regulations of Connecticut State Agencies; and

(vii) For a non-transient non-community water system, or a community water system whose operation mandates continuous daily flow, such as a prison or hospital, that does not have enough taps that can provide first-draw samples, the system shall identify, in writing, each site that did not meet the six (6) hour minimum standing time and the length of standing time for that particular substitute sample collected pursuant to section 19-13-B102(e)(8)(B)(v) of the Regulations of Connecticut State Agencies and include this information with the lead and copper tap sample results required to be submitted pursuant to subclause (i) of this subparagraph.

(B) Source water reporting requirements:

(i) A water system shall report the sampling results for all source water samples collected in accordance with section 19-13-B102(e)(10) of the Regulations of Con-

necticut State Agencies within the first ten (10) days following the end of each source water monitoring period (i.e., annually, per compliance period) specified in subsection(e)(10)(A) through (D) of this section.

(ii) With the exception of the first round of source water sampling conducted pursuant to section 19-13-B102(e)(10)(B) of the Regulations of Connecticut State Agencies, the system shall specify any site which was not sampled during previous monitoring periods, and include an explanation of why the sampling point has changed.

(C) Corrosion control treatment reporting requirements. By the applicable dates under section 19-13-B102(j)(7) of the Regulations of Connecticut State Agencies, systems shall report the following information:

(i) For systems demonstrating that they have already optimized corrosion control, information required in section 19-13-B102(j)(7)(B) of the Regulations of Connecticut State Agencies;

(ii) For systems required to optimize corrosion control, their recommendation regarding optimal corrosion control treatment under section 19-13-B102(j)(8)(A) of the Regulations of Connecticut State Agencies;

(iii) For systems required to evaluate the effectiveness of corrosion control treatments under section 19-13-B102(j)(8)(C) of the Regulations of Connecticut State Agencies, the information required by that subparagraph; and

(iv) For systems required to install optimal corrosion control approved by the department under section 19-13-B102(j)(8)(D) of the Regulations of Connecticut State Agencies, a letter certifying that the system has completed installing that treatment.

(D) Source water treatment reporting requirements; By the applicable dates in section 19-13-B102(j)(9) of the Regulations of Connecticut State Agencies, systems shall provide the following information to the department:

(i) If required under section 19-13-B102(j)(9)(B)(i) of the Regulations of Connecticut State Agencies, their proposal regarding source water treatment; and

(ii) For systems required to install source water treatment under section 19-13-B102(j)(9)(B)(ii) of the Regulations of Connecticut State Agencies, a letter certifying that the system has completed installing the treatment approved by the department within twenty four (24) months after the department approved the treatment.

(E) Lead service line replacement reporting requirements. Systems shall report the following information to the department to demonstrate compliance with the requirements of section 19-13-B102(j)(10) of the Regulations of Connecticut State Agencies:

(i) Within twelve (12) months after a system exceeds the lead action level in sampling referred to in section 19-13-B102(j)(10)(A) of the Regulations of Connecticut State Agencies, the system shall demonstrate in writing to the department that it has conducted a materials evaluation, including but not necessarily limited to the evaluation in section 19-13-B102(e)(8)(A)(i) of the Regulations of Connecticut State Agencies, to identify the initial number of lead service lines in its distribution system, and shall provide the department with the system's schedule for annually replacing at least seven percent (7%) of the initial number of lead service lines in its distribution system.

(ii) Within twelve (12) months after a system exceeds the lead action level in sampling referred to in section 19-13-B102(j)(10)(A) of the Regulations of Connecticut State Agencies, and every twelve (12) months thereafter, the system shall demonstrate in writing to the department that the system has either: replaced in the

previous twelve (12) months at least seven percent (7%) of the initial lead service lines or a greater number of lines specified by the department under section 19-13-B102(j)(10)(E) of the Regulations of Connecticut State Agencies in its distribution system, or conducted sampling that demonstrates that the lead concentration in all service line samples from individual line(s), taken pursuant to section 19-13-B102(e)(8)(B)(iii) of the Regulations of Connecticut State Agencies, is less than or equal to 0.015 mg/l. In such cases, the total number of lines replaced and those that meet the criteria in section 19-13-B102(j)(10)(C) of the Regulations of Connecticut State Agencies equals at least seven percent (7%) of the initial number of lead lines identified under subparagraph (A) of this subdivision or the number of lines specified by the department under section 19-13-B102(j)(10)(E) of the Regulations of Connecticut State Agencies.

(iii) The letter submitted annually to the department under subparagraph (E)(ii) of this subdivision shall contain the following information: the number of lead service lines that were scheduled to have been replaced during the previous year of the system's replacement schedule; the number and location of each lead service line replaced during the previous year of the system's replacement schedule; if measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.

(iv) Any system which collects lead service line samples following partial lead service line replacement, required by section 19-13-B102(j)(10) of the Regulations of Connecticut State Agencies, shall report the results to the department no later than nine (9) calendar days following the end of the month in which the system receives the laboratory results, or as specified by the department. Systems shall also report any additional information as specified by the department, in a time and manner prescribed by the department, to verify that all partial lead service line replacement activities have taken place.

(F) Public education program reporting requirements. Any water system that is subject to the public education requirements in section 19-13-B102(i)(6) of the Regulations of Connecticut State Agencies shall, no later than nine (9) calendar days after the end of each period in which the system is required to perform public education tasks in accordance with 40 CFR 141.85(c), send written documentation to the department that contains:

(i) A demonstration that the system has delivered the public education materials that meet the content requirements in paragraphs (a) to (b) inclusive, of 40 CFR 141.85 and the delivery requirements in 40 CFR 141.85(c); and

(ii) A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the system delivered public education materials during the period in which the system was required to perform public education tasks.

(G) Reporting of additional monitoring data. Any system that collects sampling data in addition to that required by this subsection shall report the results to the department by the end of the applicable monitoring period under sections 19-13-B102(e)(8) through (10) of the Regulations of Connecticut State Agencies during which the samples are collected.

(6) Reporting requirements -- Surface water source and groundwater source under the direct influence of surface water.

(A) For a system with a groundwater source under the direct influence of surface water and that does not provide and operate treatment pursuant to section 19-13-B102(j)(2) of the Regulations of Connecticut State Agencies, interim reporting shall be required prior to installation of treatment. Specific requirements shall be

determined on a case-by-case basis depending on raw water quality, proficiency of existing treatment, and adequate watershed protection. In addition, total coliform test results, turbidity measurements and daily test for residual chlorine as required by sections 19-13-B102(e)(7)(H) and (M) of the Regulations of Connecticut State Agencies, respectively, shall be reported to the department no later than nine (9) calendar days after the end of each month the system serves water to the public.

(B) A system that uses a surface water source or a groundwater source under the direct influence of surface water, and that provides and operates treatment pursuant to section 19-13-B102(j)(2) of the Regulations of Connecticut State Agencies, shall report monthly to the department the information specified in the following sub clauses.

(i) Combined filtered water turbidity measurements as required by section 19-13-B102(e)(7)(S)(i) of the Regulations of Connecticut State Agencies shall be reported to the department within nine (9) calendar days after the end of each month the system serves water to the public. Information that shall be reported includes: the total number of measurements taken during the month; the maximum daily measurement; the number and percentage of measurements taken during the month that are less than or equal to the turbidity limits specified in section 19-13-B102(j)(4) of the Regulations of Connecticut State Agencies, for the filtration technology being used; the date and value of any measurements taken during the month that exceed one (1) NTU. In addition, for any system using conventional filtration treatment or direct filtration and required to monitor the turbidity of each individual filter (or the turbidity of combined filter effluent for systems serving fewer than 10,000 persons and having two or fewer filters) under section 19-13-B102(e)(7)(S)(i) of the Regulations of Connecticut State Agencies:

(I) The system shall submit a report to the department, no later than nine (9) calendar days following the end of each month, indicating that the system has conducted individual filter monitoring or combined filter effluent (CFE) for systems serving fewer than 10,000 persons that have 2 or fewer filters as required under section 19-13-B102(e)(7)(S)(i) of the Regulations of Connecticut State Agencies;

(II) If any individual filter or combined filter effluent (CFE) for systems serving fewer than 10,000 persons that have 2 or fewer filters has a measured turbidity level of greater than 1.0 NTU in two (2) consecutive measurements taken fifteen (15) minutes apart, the system shall submit a report to the department, no later than nine (9) calendar days following the end of each month. The report shall indicate the filter number, the turbidity measurements and date(s) on which an exceedance occurred.

For systems serving 10,000 or more persons, the report shall also include either a filter profile, as defined in section 19-13-B102(a) of the Regulations of Connecticut State Agencies, which shall be produced no later than seven (7) days of an exceedance, or a reason for the exceedance.

For systems serving fewer than 10,000 persons, the report shall also include the cause of the exceedance(s), if known;

(III) For systems serving 10,000 or more persons, if any individual filter has a measured turbidity level of greater than 0.5 NTU in two (2) consecutive measurements, taken fifteen (15) minutes apart at the end of the first four (4) hours of continuous filter operation, after the filter has been backwashed or otherwise taken off line, the system shall submit a report to the department, no later than nine (9) calendar days following the end of each month. The report shall indicate the filter number, the turbidity measurements, date(s) on which an exceedance occurred, and

provide either a filter profile, as defined in subsection (a) of this section, which shall be produced no later than seven (7) days of an exceedance, or a reason for the exceedance;

(IV) If any individual filter or combined filter effluent (CFE) for systems serving fewer than 10,000 persons that have 2 or fewer filters has a measured turbidity level of greater than 1.0 NTU in two (2) consecutive measurements, taken fifteen (15) minutes apart at any time in each of three (3) consecutive months, the system shall submit a report to the department, no later than nine (9) calendar days following the end of each month. The report shall indicate the filter number, the turbidity measurements, and date(s) on which an exceedance occurred. In addition, the system shall produce a self assessment of the filter (if monitoring CFE in lieu of monitoring each individual filter, the system shall produce a self-assessment of both filters), as defined in section 19-13-B102(a) of the Regulations of Connecticut State Agencies, within fourteen (14) days of the exceedance and provide it to the department within 9 days of the end of the month in which the exceedance occurred or within 14 days of the exceedance, whichever is sooner. Systems serving fewer than 10,000 persons shall not be required to complete a filter self-assessment if a comprehensive performance evaluation (CPE) is required under section (V) of this subclause; and

(V) If any individual filter or combined filter effluent (CFE) for systems serving fewer than 10,000 persons that have 2 or fewer filters has a measured turbidity level of greater than 2.0 NTU in two (2) consecutive measurements, taken fifteen (15) minutes apart at any time in each of two (2) consecutive months, the system shall submit a report to the department, no later than nine (9) calendar days following the end of each month. The report shall indicate the filter number, the turbidity measurements, dates on which an exceedance occurred, and that a comprehensive performance evaluation (CPE) is required. In addition the system shall arrange to have a comprehensive performance evaluation conducted by a third party, approved by the department, no later than thirty (30) days following an exceedance for systems serving 10,000 or more persons and no later than sixty (60) days following an exceedance for systems serving fewer than 10,000 persons and have the evaluation completed and submitted to the department no later than ninety (90) days following the exceedance for systems serving 10,000 or more persons and no later than one-hundred-twenty (120) days following an exceedance for systems serving fewer than 10,000 persons.

(ii) Disinfection information specified in subsections (e)(7)(S)(ii) and (e)(7)(S)(iii) shall be reported to the department within nine (9) calendar days after the end of each month the system serves water to the public. Information that shall be reported includes: for each day, the lowest measurement of residual disinfectant concentration in mg/L in the water entering the distribution system, the dates and duration of each period when the residual disinfectant concentration in water entering the distribution system fell below 0.2 mg/L and when the department was notified of the occurrence. The following information shall be submitted on the samples taken in the distribution system in conjunction with total coliform monitoring pursuant to section 19-13-B102(e)(7) of the Regulations of Connecticut State Agencies: number of instances where the residual disinfectant concentration is measured, number of instances where the residual disinfection concentration is not measured but heterotrophic bacteria plate count (HPC) is measured, number of instances where the residual disinfectant concentration is measured but not detected and no HPC is measured, number of instances where no residual disinfectant concentration is detected and where HPC is greater than (500)/ml, number of instances where the residual disinfectant concen-

tration is not measured and HPC is greater than (500)/ml and for the current and previous month the system serves water to the public the value of “V” in the formula specified in section 19-13-B102(j)(3)(B)(iii) of the Regulations of Connecticut State Agencies.

(iii) Each system, upon discovering that a waterborne disease outbreak potentially attributable to that water system has occurred, shall report that occurrence to the department as soon as possible, but no later than by the end of the next business day. If at any time the combined filtered water turbidity exceeds one (1) NTU, the system shall inform the department as soon as possible, but no later than the end of the next business day. If at any time the residual falls below 0.2 mg/L in the water entering the distribution system, the system shall notify the department as soon as possible, but no later than by the end of the next business day. The system also shall notify the department by the end of the next business day whether the residual was restored to at least 0.2 mg/L within four (4) hours from the time of discovery of insufficient chlorine residual.

(iv) A system required to develop a disinfection profile pursuant to section 19-13-B102(e)(7)(S)(iv) or (v) of the Regulations of Connecticut State Agencies shall submit the disinfection profile to the department no later than nine (9) calendar days following the end of each month.

(v) A system required to develop a disinfection profile and which decides to make a significant change to its disinfection practice, as defined in 40 CFR 141.172(c)(1), and in 40 CFR 141.541, as amended January 14, 2002, shall submit to the department the following: 1) a description of the proposed disinfection practice change; 2) a disinfection benchmark in accordance with paragraphs (2) to (3) inclusive, of 40 CFR 141.172(c), 40 CFR 141.543, as amended January 14, 2002 and 141.544, as amended January 14, 2002; 3) disinfection profiling data used to determine the disinfection benchmark as monitored pursuant to sections 19-13-B102(e)(7)(S)(iv) or 19-13-B102(e)(7)(S)(v) of the Regulations of Connecticut State Agencies, and; 4) an analysis of how the proposed change will affect current levels of disinfection. Prior to implementing the proposed disinfection practice change, the system shall consult with and obtain approval from the department.

(7) Reporting and recordkeeping requirements — disinfectants and disinfection byproducts

Disinfectant residual, disinfection byproduct, and disinfection byproduct precursor information collected under section 19-13-B102(e) of the Regulations of Connecticut State Agencies shall be reported to the department no later than nine (9) calendar days after the end of each monitoring period in which samples were collected.

(A) Disinfectants.

(i) A system monitoring for chlorine or chloramines as required by section 19-13-B102(e)(11)(D)(i) of the Regulations of Connecticut State Agencies shall report:

(I) The number of samples taken during each month of the last quarter;

(II) The monthly arithmetic average of all samples taken in each month for the last 12 months;

(III) The arithmetic average of all monthly averages for the last 12 months; and

(IV) Whether, based on section 19-13-B102(e)(11)(G), the MRDL was violated.

(ii) A system monitoring for chlorine dioxide as required by sections 19-13-B102(e)(11)(D)(ii) and (iii) of the Regulations of Connecticut State Agencies shall report:

(I) The dates, results, and locations of samples taken during the last quarter;

(II) Whether, based on section 19-13-B102(e)(11)(G), the MRDL was violated;

- (III) Whether the MRDL was violated in any two consecutive daily samples; and
- (IV) Whether the resulting violation was a tier 1 or tier 2 notice.

(B) Disinfection byproducts.

A system monitoring for disinfection byproducts as required by section 19-13-B102(e)(11)(C) of the Regulations of Connecticut State Agencies shall report the following information to the department.

(i) A system monitoring for TTHM and HAA5 on a quarterly or more frequent basis shall report:

(I) The number of samples taken during the last quarter;

(II) The location, date, and result of each sample taken in the last quarter;

(III) The arithmetic average of all samples taken in the last quarter;

(IV) The annual arithmetic average of the quarterly arithmetic averages for the last four (4) quarters; and

(V) Whether, based on section 19-13-B102(e)(11)(G), the MCL was violated.

(ii) A system monitoring for TTHM and HAA5 less frequently than quarterly (but at least annually) shall report:

(I) The number of samples taken during the last monitoring period;

(II) The location, date, and result of each sample taken during the last monitoring period;

(III) The arithmetic average of all samples taken over the last year; and

(IV) Whether, based on section 19-13-B102(e)(11)(G), the MCL was violated.

(iii) A system monitoring for TTHM and HAA5 less frequently than annually shall report the location, date, and result of each sample taken as well as whether, based on section 19-13-B102(e)(11)(G), the MCL was violated.

(iv) A system monitoring for chlorite shall report:

(I) The number of entry point samples taken each month for the last three months;

(II) The location, date, and result of each sample (both entry point and distribution system) taken during the last quarter;

(III) For each month in the reporting period, the individual arithmetic averages of each three (3) sample set taken in the distribution system; and

(IV) Whether, based on section 19-13-B102(e)(11)(G), the MCL was violated and in which month it was violated.

(v) A system monitoring for bromate shall report:

(I) The number of samples taken during the last quarter;

(II) The location, date, and result of each sample taken during the last quarter;

(III) The arithmetic average of the monthly arithmetic averages of all samples taken in the last year; and

(IV) Whether, based on section 19-13-B102(e)(11)(G), the MCL was violated.

(C) Disinfection byproduct precursors and enhanced coagulation or enhanced softening.

(i) Systems monitoring monthly or quarterly for TOC under the requirements of section 19-13-B102(e)(11)(E) of the Regulations of Connecticut State Agencies and required to meet the enhanced coagulation or enhanced softening requirements in section 19-13-B102(j)(11)(B)(i) or (ii) of the Regulations of Connecticut State Agencies shall report the following to the department:

(I) The number of paired samples taken during the last quarter;

(II) The location, date, and result of each paired sample and associated alkalinity taken during the last quarter;

(III) For each month in the reporting period that paired samples were taken, the arithmetic average of the percent reduction of toc for each paired sample and the required TOC percent removal;

(IV) Calculations for determining compliance with the TOC percent removal requirements, as provided in section 19-13-B102(j)(11)(C) of the Regulations of Connecticut State Agencies; and

(V) Whether the system is in compliance with the enhanced coagulation or enhanced softening percent removal requirements in section 19-13-B102 (j)(11)(B) of the Regulations of Connecticut State Agencies for the last four (4) quarters.

(ii) Systems monitoring monthly or quarterly for TOC under the requirements of section 19-13-B102(e)(11)(E) of the Regulations of Connecticut State Agencies and meeting one or more of the alternative compliance criteria in section 19-13-B102(j)(11)(A) of the Regulations of Connecticut State Agencies shall report the following to the department:

(I) The alternative compliance criterion that the system is using;

(II) The number of paired samples taken during the last quarter;

(III) The location, date, and result of each paired sample and associated alkalinity taken during the last quarter;

(IV) The running annual average based on monthly averages, or quarterly samples, of source water TOC for systems meeting a criterion in section 19-13-B102(j)(11)(A)(i) or (ii) of the Regulations of Connecticut State Agencies or of treated water TOC for systems meeting the criterion in subsection (j)(11)(A)(i) of this section;

(V) The running annual average based on monthly samples, or quarterly samples, of source or finished water SUVA for systems meeting the criterion in section 19-13-B102(j)(11)(A)(iv) of the Regulations of Connecticut State Agencies;

(VI) The running annual average of source water alkalinity for systems meeting the criterion in section 19-13-B102(j)(11)(A)(ii) of Regulations of Connecticut State Agencies and of treated water alkalinity for systems meeting the criterion in section 19-13-B102 (j)(11)(A)(v) of the Regulations of Connecticut State Agencies;

(VII) The running annual average for both TTHM and HAA5 for systems meeting the criterion in section 19-13-B102(j)(11)(A)(iii) of the Regulations of Connecticut State Agencies;

(VIII) The running annual average of the amount of magnesium hardness removal (as CaCO₃, in mg/l) for systems meeting the criterion in section 19-13-B102(j)(11)(A)(vi) of the Regulations of Connecticut State Agencies; and

(IX) Whether the system is in compliance with the particular alternative compliance criterion in section 19-13-B102(j)(11)(A) of the Regulations of Connecticut State Agencies.

(8) Reporting and recordkeeping requirements — filter backwash recycling

(A) A system shall notify the department in writing by December 8, 2003, if the system recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes. This notification shall include the following:

(i) A plant schematic showing the origin of all flows, which are recycled including, but not limited to, spent filter backwash water, thickener supernatant, and liquids from dewatering processes, the hydraulic conveyance used to transport them, and the location where they are reintroduced back into the treatment plant; and

(ii) Typical recycle flow in gallons per minute (gpm), the highest observed plant flow experienced in the previous year in gpm, design flow for the treatment plant in gpm, and the approved operating capacity for the plant where the department has made such determinations.

(B) A system shall collect and retain on file for review and evaluation by the department beginning June 8, 2004, the following recycle flow information:

(i) A copy of the recycle notification and information submitted to the department pursuant to subparagraph (A) of this subdivision;

(ii) A list of all recycle flows and the frequency with which they are returned;

(iii) Average and maximum backwash flow rates through the filters and the average and maximum duration of the filter backwash process in minutes;

(iv) Typical filter run length and a written summary of how filter run length is determined;

(v) The type of treatment provided for the recycle flow; and

(vi) Data on the physical dimensions of the equalization and treatment units, typical and maximum hydraulic loading rates, type of treatment chemicals used and average dose and frequency of use, and frequency at which solids are removed, if applicable.

(i) Public notification and consumer confidence report requirements.

(1) A public water system that has a tier 1 notice shall do the following:

(A) Provide a public notice to its customers as soon as practical but no later than twenty four (24) hours after the system learns of the violation in one or more of the following forms of delivery:

(i) Appropriate broadcast media, such as radio and television;

(ii) Posting of the notice in conspicuous location(s) throughout the area served by the public water system;

(iii) Hand delivery of the notice to persons served by the public water system; or

(iv) Another delivery method approved in writing by the department.

(B) Initiate consultation with the department as soon as practical but no later than twenty-four (24) hours after the public water system learns of the violation or situation, to determine additional public notice requirements. The system shall comply with any additional public notification requirements that are established as a result of the consultation with the department. Such requirements may include the timing, form, manner, frequency, and content of repeat notices (if any) and other actions designed to reach all persons served.

(2) A public water system that has a tier 2 notice shall do the following:

(A) Provide a public notice to its customers as soon as practical but no later than thirty (30) days after the system learns of the violation in one or more of the following forms of delivery:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the system; and publication in a local newspaper or newsletter;

(ii) Posting the notice in conspicuous locations throughout the distribution system and frequented by persons served by the system; or

(iii) Any other delivery method approved in writing by the department.

(B) After the initial notice, the public water system shall repeat the notice every three (3) months for as long as the violation or situation persists.

(C) If the public notice is posted, the notice shall remain in place for as long as the violation or situation persists, but in no case for less than seven (7) days, even if the violation or situation is resolved.

(3) A public water system that has a tier 3 notice shall do the following:

(A) Provide a public notice no later than one (1) year after the system learns of the violation or situation or begins operating under a variance or exemption in one or more of the following forms of delivery:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the system; and

- (ii) Publication in a local newspaper or newsletter; or
- (iii) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system; or
- (iv) Any other delivery method approved in writing by the department.

(B) After the initial notice, the notice shall be repeated annually for as long as the violation, variance, exemption or other situation persists. If the notice is posted, the notice shall remain in place for as long as the violation, variance, exemption or other situation persists, but in no case less than seven (7) days even if the violation or situation is resolved.

(C) The consumer confidence report (CCR) required under section 19-13-B102(i)(10) of the Regulations of Connecticut State Agencies may be used as a vehicle for the initial public notice of a tier 3 notice and all required repeat notices, provided:

(i) The CCR is provided to persons served no later than twelve (12) months after the system learns of the violation or situation, as required under section 19-13-B102(i)(3)(A) of the Regulations of Connecticut state agencies;

(ii) The tier 3 notice contained in the CCR follows the content requirements under section 19-13-B102(i)(4) of the Regulations of Connecticut State Agencies; and

(iii) The CCR is distributed following the delivery requirements under section 19-13-B102(i)(3)(A) of the Regulations of Connecticut State Agencies.

(4) General content of public notice for tier 1, tier 2 or tier 3 notice. Each notice required by this section shall be approved by the department.

(A) Each public notice for a tier 1, tier 2 or tier 3 notice shall contain the following information:

(i) a description of the violation or situation, including the contaminant(s) of concern, and when applicable the contaminant level(s);

(ii) any potential adverse health effects from the violation or situation, including, but not limited to, any applicable standard language required by 40 CFR 141.205 as amended from time to time;

(iii) the population at risk, including any subpopulation particularly vulnerable if exposed to the contaminant in their drinking water;

(iv) what the system is doing to correct the violation or situation;

(v) whether alternative water supplies should be used;

(vi) what action the consumer should take, including when the consumer should seek medical help, if known;

(vii) the name, business address, and the telephone number of the owner, operator or designee of the public water system as a source of additional information concerning the notice;

(viii) when the violation or situation occurred;

(ix) when the water system expects to return to compliance or resolve the situation; and

(x) a statement to encourage the recipient of notice to distribute the public notice to other persons served, using the following language, where applicable: “please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.”

(B) Each notice for public water systems operating under a variance, administrative order or an exemption shall contain the following information:

(i) an explanation of the reasons for the variance, order or exemption;

(ii) the date on which the variance, order or exemption was issued;

(iii) a brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance, order or exemption; and

(iv) a notice of any opportunity for public input in the review of the variance, order or exemption.

(C) Each public notice required by this section:

(i) shall be displayed in a conspicuous way when printed or posted;

(ii) shall not contain overly technical language or very small print;

(iii) shall not be formatted in a way that defeats the purpose of the notice; and

(iv) shall not contain language that nullifies the purpose of the notice.

(D) For systems serving a large proportion of non-english speaking consumers, as determined in writing by the department, the notice shall also contain information in the appropriate foreign language regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the notice or to request assistance in the appropriate foreign language.

(5) General notice requirements for other than tier 1, tier 2 or tier 3 notice.

(A) A water system that exceeds the copper action level, based on tap water samples collected in accordance with section 19-13-B102(e)(8), shall notify consumers of the concentration by direct mail, no later than thirty (30) days after the system learns of the exceedance. The form and manner of the public notice shall follow the requirements for a tier 2 notice as prescribed in section 19-13-B102(i)(2). At a minimum, the notice shall include the following mandatory language: "if you have been diagnosed with copper intolerance due to a genetic deficiency, please inform your physician that the 90th percentile level of copper in our water is (BLANK) milligrams per liter." (the blank space should contain the 90th percentile level of copper in the water).

(B) When the sodium concentration for water ready for consumption exceeds twenty eight (28.0) mg/l consumers of the public water system shall be notified of the concentration by direct mail or in the next billing cycle, and such notification shall be repeated annually for as long as the exceedance exists. At a minimum the notice shall include the following mandatory language: "If you have been placed on a sodium-restricted diet, please inform your physician that our water contains (BLANK) mg/l of sodium." (the blank ____ should contain the level of sodium in the water.)

(C) A public water system that is required to monitor for the unregulated contaminants, pursuant to 40 CFR 141.40, shall notify persons served by the system of the availability of the results of such sampling no longer than twelve (12) months after the monitoring results are known. The form and manner of the public notice shall follow the requirements for a tier 3 notice prescribed in section 19-13-B102(i)(3). The notice shall also identify a person and provide a telephone number for information on the monitoring results.

(D) A public water system with fluoride concentration between 2 mg/l and 4.1 mg/l shall provide public notice to persons served as soon as practical, but no later than twelve (12) months from the day the water system learns of the fluoride level. The notice shall be repeated annually for as long as the fluoride level remains between 2 mg/l and 4.1 mg/l. If the notice is posted, it shall remain in place for as long as the fluoride level remains between 2 mg/l and 4.1 mg/l, but in no case for less than seven (7) days. The notice shall follow the requirements for a tier 3

notice as specified in section 19-13-B102(i)(3), and shall contain at a minimum, the language required in 40 CFR 141.208(c).

(6) Public education requirements. A water system that exceeds the lead action level based on tap water samples collected in accordance with subsection (e)(8) of this section shall deliver the public education materials contained in 40 CFR 141.85(a) and 40 CFR 141.85(b) in accordance with the requirements in 40 CFR 141.85(c) within sixty (60) days after the end of the monitoring period in which the exceedance occurs and shall offer to sample the tap water of any customer who requests it according to 40 CFR 141.85(d), as amended from time to time.

(7) A public water system that sells or otherwise provides drinking water to a consecutive public water system is required to give public notice to the owner or operator of the consecutive public water system. The consecutive public water system is responsible for providing public notice to the persons it serves.

(8) A public water system, no later than ten (10) days after completing the public notification requirements of this section for the initial public notice and any repeat notices, shall submit to the department a certification that it has fully complied with the requirements of section 19-13-B102(i). The public water system shall include with this certification a representative copy of each type of notice distributed, published, posted, and made available to the persons served by the system and to the media.

(9) Notice to new customers or billing units.

(A) A community water system shall give a copy of the most recent public notice for any continuing violation or for the existence of a variance, order, exemption, or other ongoing situations requiring a public notice, to all new billing units or new customers, prior to or at the time service begins.

(B) A non-community water system shall continuously post the public notice in conspicuous locations in order to inform new customers of any continuing violation, variance, order exemption, or other situation requiring a public notice, for as long as the violation, variance, order, exemption, or other situation persists.

(10) Consumer confidence report requirements.

(A) A community water system shall annually prepare a consumer confidence report that contains data collected during the previous calendar year and includes the information specified in 40 CFR 141.153 and 40 CFR 141.154.

(B) No later than July 1st of each year, a community water system serving 10,000 or more persons shall mail or directly deliver the report to its customers. A good faith effort to reach the customers who do not get water bills, using methods acceptable to the department, shall be made. Systems serving 100,000 persons or more shall post the report to a publicly accessible site on the internet. A new community water system shall deliver its first report by July 1st of the year after its first full calendar year in operation and annually thereafter.

(C) A community water system that sells water to another community water system shall deliver the applicable information required in 40 CFR 141.153 to the buyer system by April 1st of each year.

(D) Community water systems serving more than 500 persons and fewer than 10,000 persons shall, by July 1st of each year, do the following:

(i) publish the report in one or more local newspapers serving the area in which the system's customers are located;

(ii) inform the customers, by mail or door-to-door delivery, that the report is available upon request; and

(iii) make copies of the report available to the public upon request.

(E) Community water systems serving 500 or fewer persons shall, by July 1st of each year, do the following:

(i) inform the customers, by mail, door-to-door delivery, or by posting in a location approved by the department that the report is available upon request; and

(ii) make copies of the report available to the public upon request.

(F) No later than July 1st of each year, a community water system shall mail three (3) copies of the report to the department and one (1) copy to the local director of health of each city, town, borough or district served by the community water system.

(G) No later than August 9th of each year a community water system shall submit to the department a certification that the report has been distributed or, when applicable, made available to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the department. The certification shall be on a form provided by the department.

(H) Each community water system shall make its reports available to the public upon request.

(I) For the purpose of section 19-13-B102(i)(10) of the Regulations of Connecticut State Agencies, the term “detected” is defined in 40 CFR 141.151(d).

(J) Each community water system serving one thousand or more persons or two hundred fifty consumers or more shall include in its consumer confidence report educational materials or information on:

(i) water conservation;

(ii) water supply source protection methods, including methods to reduce contamination; and

(iii) health effects and sources of lead and copper.

(j) **Treatment techniques.**

(1) A MCLG of zero (0) is set for the following microbiological contaminants: *Giardia lamblia*, *cryptosporidium*, viruses and *legionella*.

(2) General Requirements -- Surface Water source and groundwater source under the direct influence of surface water.

(A) Each system with a surface water source or a groundwater source under the direct influence of surface water shall install and properly operate water treatment processes that reliably achieve:

(i) At least 99.9 percent (3-LOG) removal and/or inactivation of *Giardia lamblia* cysts between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer;

(ii) At least 99.99 percent (4-LOG) removal and/or inactivation of viruses between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer; and

(iii) For systems serving 10,000 or more persons, and for systems serving fewer than 10,000 persons, at least 99 percent (2-log) removal of *cryptosporidium* between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer.

(B) A system using a surface water source or a groundwater source under the direct influence of surface water is considered to be in compliance with the requirements of subparagraph (A) of this subdivision if it meets the filtration requirements in subsection (j)(4) and the disinfection requirements in subsection (j)(3)(B) of this section.

(C) Each system using a surface water source or a groundwater source under the direct influence of surface water shall be operated by qualified personnel pursuant to sections 25-32-7a through 25-32-14 of the Regulations of Connecticut State Agencies.

(D) A system shall install and have operational treatment consisting of disinfection and filtration in accordance with section 19-13-B102(j)(2) of the Regulations of

Connecticut State Agencies within eighteen (18) months following the department’s determination that treatment is required for a groundwater source. Such determination shall be made if that groundwater source is at risk of contamination from surface water. In making this determination, the department shall be guided by its document entitled “Determination Of Groundwater Under The Direct Influence of Surface Water.” As an interim requirement until such treatment is operational, turbidity shall not exceed a monthly average of one (1) NTU or a two (2) consecutive day average of five (5) NTUS as monitored pursuant to section 19-13-B102(e)(7)(H) of the Regulations of Connecticut State Agencies and the system supplied by this source shall be free of any waterborne disease outbreak.

(3) Disinfection.

(A) A system that uses a groundwater source under the direct influence of surface water, and that does not provide and operate treatment pursuant to section 19-13-B102(j)(2) of the Regulations of Connecticut State Agencies, shall provide interim disinfection pursuant to section 19-13-B102(e)(7)(M) of the Regulations of Connecticut State Agencies.

(B) A system that uses a surface water source or a groundwater source under the direct influence of surface water, and that provides and operates treatment pursuant to section 19-13-B102(j)(2) of the Regulations of Connecticut state agencies, shall provide disinfection treatment as specified in the following subclauses of this subparagraph.

(i) The disinfection treatment shall be sufficient to ensure that the total treatment processes of that source achieve at least 99.9 percent (3-LOG) inactivation and/or removal of *Giardia lamblia* cysts and at least 99.99 percent (4-LOG) inactivation and/or removal of viruses. Disinfection effectiveness shall be determined by the calculation of “CT” values as specified in the most recent edition of the EPA “Guidance Manual For Compliance With The Filtration And Disinfection Requirements For Public Water Systems Using Surface Water Sources.”

(ii) The residual disinfectant concentration in the water entering the distribution system, measured as specified in 40 CFR 141.74(a)(2) and section 19-13-B102(e)(7)(S)(ii) of the Regulations of Connecticut State Agencies shall not be less than 0.2 mg/l for more than four (4) hours.

(iii) The residual disinfectant concentration in the distribution system, measured as free chlorine, combined chlorine, or chlorine dioxide, as specified in 40 CFR 141.74(a)(2) and section 19-13-B102(e)(7)(S)(ii) of the Regulations of Connecticut state Agencies, shall not be undetectable in more than five percent (5%) of the samples each month, for any two (2) consecutive months that the system serves water to the public. Water in the distribution system with a heterotrophic bacteria concentration less than or equal to five hundred (500)/ML, measured as heterotrophic plate count (HPC) as specified in 40 CFR 141.74(a)(1) is deemed to have a detectable disinfectant residual for purposes of determining compliance with this requirement. The value “V” in the following formula shall not exceed five percent (5%) in one (1) month, for any two (2) consecutive months.

$$V = \frac{C + D + E}{A + B} \times 100$$

Where:

A = Number of instances where the residual disinfectant concentration is measured;

B = Number of instances where the residual disinfectant concentration is not measured but heterotrophic bacteria plate count (HPC) is measured;

C = Number of instances where the residual disinfectant concentration is measured but not detected and no HPC is measured;

D = Number of instances where no residual disinfectant concentration is detected and where the HPC is greater than five hundred (500)/ml; and

E = Number of instances where the residual disinfectant concentration is not measured and HPC is greater than five hundred (500)/ml.

(4) Filtration.

A system that uses a surface water source or a groundwater source under the direct influence of surface water, and that provides and operates treatment pursuant to section 19-13-B102(j)(2), shall provide filtration which complies with the requirements of subparagraphs (A), (B), (C), or (D) of this subdivision.

(A) Conventional filtration treatment or direct filtration.

(i) For systems serving 10,000 or more persons and using conventional or direct filtration, and for systems serving fewer than 10,000 persons and using conventional or direct filtration, the turbidity level of representative samples of a system's combined filtered water shall be less than or equal to 0.3 NTU in at least ninety five percent (95%) of the measurements taken each month pursuant to section 19-13-B102(e)(7)(S)(i) of the Regulations of Connecticut State Agencies.

(ii) The turbidity level of representative samples of a system's combined filtered water (treatment effluent) shall at no time exceed one (1) NTU, measured pursuant to section 19-13-B102(e)(7)(S)(i) of the Regulations of Connecticut State Agencies.

(iii) A system required to submit a report to the department for a self assessment or comprehensive performance evaluation, pursuant to section 19-13-B102(h)(6)(B)(i) of the Regulations of Connecticut State Agencies, shall implement the improvements identified in accordance with a schedule as approved in writing by the department.

(B) Slow sand filtration.

For systems using slow sand filtration, the turbidity level of representative samples of a system's combined filtered water shall be less than or equal to one (1) NTU in all of the measurements taken each month, measured as specified in 40 CFR 141.74(a)(4) and subsection (e)(7)(S)(i) of this section.

(C) Diatomaceous earth filtration.

For systems using diatomaceous earth filtration, the turbidity level of representative samples of a system's combined filtered water shall be less than or equal to one (1) NTU in all of the measurements taken each month, measured as specified in 40 CFR 141.74(a)(4) and subsection (e)(7)(S)(i) of this section.

(D) Other filtration technologies.

A system may use filtration technology not listed in subparagraphs (A) through (C) of this subdivision if it demonstrates to the department, using pilot plant studies or other means, that the alternative filtration technology, in combination with disinfection treatment that meets the requirements of subdivision (3)(B) of this subsection, consistently achieves ninety nine and nine tenths percent (99.9%) removal and/or inactivation of *Giardia lamblia* cysts and ninety nine and ninety nine hundredths percent (99.99%) removal and/or inactivation of viruses. For a system that makes this demonstration, the requirements of subparagraphs (3)(B) and (4)(A) of this subsection apply.

(E) A system serving 10,000 or more persons shall achieve ninety nine percent (99%) removal of cryptosporidium. Systems serving fewer than 10,000 persons shall achieve ninety nine percent (99%) removal of cryptosporidium. A system is deemed to be in compliance with this requirement if it meets the combined filtered

water turbidity level requirements of subparagraphs (4)(A) through (4)(D) of this subsection.

(F) Any system that recycles spent filter backwash water, thickener supernatant, or liquids from dewatering processes shall return these flows through the processes of a system's existing conventional or direct filtration or at an alternate location approved by the department by June 8, 2004. If capital improvements are required to modify the recycle location to meet this requirement, all capital improvements shall be completed, as approved by the department, no later than June 8, 2006.

(5) Treatment techniques for acrylamide and epichlorohydrin. Each public water system shall certify annually in writing to the department that when acrylamide and epichlorohydrin are used in drinking water systems, the combination of dose and monomer level does not exceed the levels specified in 40 CFR 141.111.

(6) General Requirements—control of lead and copper.

(A) Applicability and effective dates.

(i) The requirements of this subsection constitute the drinking water regulations for lead and copper. Unless otherwise indicated, each of the provisions of this subsection applies to community water systems and non-transient, non-community water systems (hereinafter referred to as "water systems" or "systems").

(ii) The requirements set forth in subsections (e) (7) (L), (e) (8) through (e) (10), (h) (5) and (l) (1) (G) of this section shall take effect July 7, 1991. The requirements in subdivisions (7) through (10) of this subsection and subsection (i) (6) of this section shall take effect December 7, 1992.

(B) Lead and copper action levels.

(i) The lead action level is exceeded if the concentration of lead in more than ten percent (10%) of tap water samples collected during any monitoring period conducted in accordance with subsection (e) (8) of this section is greater than 0.015 mg/l (i.e., if the "90th percentile" lead level is greater than 0.015 mg/l).

(ii) The copper action level is exceeded if the concentration of copper in more than ten percent (10%) of tap water samples collected during any monitoring period conducted in accordance with subsection (e) (8) of this section is greater than 1.3 mg/l (i.e., if the "90th percentile" copper level is greater than 1.3 mg/l).

(iii) The 90th percentile lead and copper levels shall be computed as follows:

The results of all lead or copper samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number one (1) for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken. The number of samples taken during the monitoring period shall be multiplied by 0.9. The contaminant concentration in the numbered sample yielded by the calculation above is the 90th percentile contaminant level. For water systems serving fewer than one hundred (100) people that collect five (5) samples per monitoring period, the 90th percentile is computed by taking the average of the highest and second highest concentrations.

(C) Corrosion control treatment requirements

(i) All water systems shall install and operate optimal corrosion control treatment as defined in subsection (a) (44) of this section.

(ii) Any public system that complies with the applicable corrosion control treatment requirements approved by the department under subdivisions (7) and (8) of this

subsection shall be deemed to be in compliance with the treatment requirement contained in subparagraph (D) (i) of this subdivision.

(D) Source water treatment requirements. Any system exceeding the lead or copper action level shall implement all applicable source water treatment requirements approved by the department under subdivision (9) of this subsection.

(E) Lead service line replacement requirements. Any system exceeding the lead action level after implementation of applicable corrosion control and source water treatment requirements shall complete the lead service line replacement requirements contained in subdivision (10) of this subsection.

(F) Public education requirements.

(i) Any system exceeding the lead action level shall implement the public education requirements contained in 40 CFR 141.85 as amended within sixty (60) days after the end of the monitoring period in which the exceedance occurs.

(ii) Any system exceeding the copper action level shall notify consumers as required in section 19-13-B102(i)(5)(A) of the Regulations of Connecticut State Agencies.

(G) Monitoring and analytical requirements. Tap water monitoring for lead and copper, monitoring for water quality parameters, source water monitoring for lead and copper, and analyses of the monitoring results under this subsection shall be completed in compliance with subsections (e) (7) (L) and (e) (8) through (e) (10) of this section.

(H) Reporting requirements. Systems shall report to the department any information required by the treatment provisions of this subsection and subsection (h) (5) of this section.

(I) Recordkeeping requirements. Systems shall maintain records in accordance with subsection (I) (1) (G) of this section.

(J) Violation of drinking water regulations. Failure to comply with the applicable requirements of subsections (e) (7) (L), (e) (8) through (e) (10), (h) (5), (i) (6), (j) (6) through (j) (10) and (I) (1) (G) of this section, including requirements established by the department pursuant to these provisions, shall constitute a violation of the drinking water regulations for lead and/or copper.

(7) Applicability of corrosion control treatment steps to small, medium-size and large water systems.

(A) Systems shall complete the applicable corrosion control treatment requirements described in subdivision (8) of this subsection by the deadlines established in this subdivision.

(i) A large system (serving greater than fifty thousand (50,000) persons) shall complete the corrosion control treatment steps specified in subparagraph (D) of this subdivision, unless it is deemed by the department to have optimized corrosion control under subparagraph (B) (ii) or (B) (iii) of this subdivision.

(ii) A small system (serving less than or equal to 3,300 persons) and a medium-size system (serving greater than 3,300 and less than or equal to 50,000 persons) shall complete the corrosion control treatment steps specified in subparagraph (E) of this subdivision, unless it is deemed to have optimized corrosion control under subparagraph (B) (i), (B) (ii), or (B) (iii) of this subdivision.

(B) A system is deemed to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in this subdivision if the system satisfies one (1) of the criteria specified in subclauses (i) through (iii) of this subparagraph. Any such system deemed to have optimized corrosion control under this subparagraph, and which has treatment in place, shall continue

to operate and maintain optimal corrosion control treatment and meet any requirements that the department determines appropriate to ensure optimal corrosion control treatment is maintained.

(i) A small or medium-size water system is deemed to have optimized corrosion control if the system meets the lead and copper action levels during each of two (2) consecutive six (6) month monitoring periods conducted in accordance with section 19-13-B102(e)(8) of the Regulations of Connecticut State Agencies.

(ii) Any water system may be deemed by the department to have optimized corrosion control treatment if the system demonstrates to the satisfaction of the department that it has conducted activities equivalent to the corrosion control steps applicable to such system under this subdivision. If the department makes this determination, it shall provide the system with written notice explaining the basis for its decision and shall specify the water quality control parameters representing optimal corrosion control in accordance with subdivision (8)(F) of this subsection. Water systems deemed to have optimized corrosion control under this subclause shall operate in compliance with the department-designated optimal water quality control parameters in accordance with section 19-13-B102(j)(8)(G) of the Regulations of Connecticut State Agencies and continue to conduct lead and copper tap and water quality parameter sampling in accordance with sections 19-13-B102(e)(8)(F) and 19-13-B102(e)(9)(D) of the Regulations of Connecticut State Agencies, respectively. A system shall provide the department with the following information in order to support a determination under this subparagraph: the results of all test samples collected for each of the water quality parameters in subdivision (8)(C)(iii) of this subsection; a report explaining the test methods used by the water system to evaluate the corrosion control treatments listed in subdivision (8)(C)(i) of this subsection, the results of all tests conducted, and the basis for the system's selection of optimal corrosion control treatment, a report explaining how corrosion control has been installed and how it is being maintained to insure minimal lead and copper concentrations at consumers taps; and the results of tap water samples collected in accordance with section 19-13-B102(e)(10)(B) of the Regulations of Connecticut State Agencies at least once every six (6) months for one (1) year after corrosion control has been installed.

(iii) Any water system is deemed to have optimized corrosion control if it submits results of tap water monitoring conducted in accordance with section 19-13-B102(e)(8) of the Regulations of Connecticut State Agencies and source water monitoring conducted in accordance with section 19-13-B102(e)(10) of the Regulations of Connecticut State Agencies that demonstrate for two (2) consecutive six (6) month monitoring periods that the difference between the 90th percentile tap water lead level computed under subdivision (6)(C)(iii) of this subsection and the highest source water lead concentration, is less than the practical quantification level for lead of 0.005 mg/l.

Those systems whose highest source water lead level is below the method detection limit may also be deemed to have optimized corrosion control under this subclause if the 90th percentile tap water lead level is less than or equal to the practical quantification level for lead for two consecutive six (6) month monitoring periods.

Any water system deemed to have optimized corrosion control in accordance with this subclause shall continue monitoring for lead and copper at the tap, no less frequently than once every three calendar years using the reduced number of sites specified in section 19-13-B102(e)(8)(C) of the Regulations of Connecticut State Agencies and collecting the samples at times and locations specified in section 19-13-B102(e)(8)(G) of the Regulations of Connecticut State Agencies.

Any water system deemed to have optimized corrosion control pursuant to this subclause shall obtain the approval of the department in writing, pursuant to section 19-13-B102(d)(2) of the Regulations of Connecticut State Agencies, prior to any change in treatment or the addition of a new source. The department may require any such system to conduct additional monitoring or to take other action the department deems appropriate to ensure that such system maintains minimal levels of corrosion in its distribution system.

A system is not deemed to have optimized corrosion control under this subclause unless it meets the copper action level.

Any system that is required to implement corrosion control because it is no longer deemed to have optimized corrosion control under this subclause shall implement corrosion control treatment in accordance with the deadlines in section 19-13-B102(j)(7)(E) of the Regulations of Connecticut State Agencies. Any such large system shall adhere to the schedule specified in that subparagraph for medium-size systems, with the time periods for completing each step being determined as of the date the system is no longer deemed to have optimized corrosion control under this subclause.

(C) Any small water system or medium-size water system that is required to complete the corrosion control steps because it exceeded the lead or copper action level may cease completing the treatment steps whenever the system meets both action levels during each of two (2) consecutive monitoring periods conducted pursuant to section 19-13-B102(e)(8) of the Regulations of Connecticut State Agencies and submits the result to the department. If any such water system thereafter exceeds the lead or copper action level during any monitoring period, the system (or the department, as the case may be) shall recommence completion of the applicable treatment steps, beginning with the first treatment step that was not previously completed in its entirety. The department may require a system to repeat treatment steps previously completed by the system where the department determines that this is necessary to properly implement the treatment requirements of this subdivision. The department shall notify the system in writing of such a determination and explain the basis for its decision. The requirement for any small or medium-size system to implement corrosion control treatment steps in accordance with section 19-13-B102(j)(7)(E) of the Regulations of Connecticut State Agencies, including systems deemed to have optimized corrosion control under section 19-13-B102(j)(7)(B) of the Regulations of Connecticut State Agencies, is triggered whenever any small or medium-size system exceeds the lead or copper action level.

(D) Treatment steps and deadlines for large systems. Except as provided in subparagraphs (B)(ii) and (B)(iii) of this subdivision, large water systems shall complete the following corrosion control treatment steps (described in the referenced portions of subdivision (8)(A) of this subsection and sections 19-13-B102(e)(8) and (9) of the Regulations of Connecticut State Agencies) by the indicated dates.

(i) Step 1: The system shall conduct initial monitoring (sections 19-13-B102(e)(8)(D) and (e)(9)(B) of the Regulations of Connecticut State Agencies) during two (2) consecutive six(6) month monitoring periods by January 1, 1993.

(ii) Step 2: The system shall complete and submit corrosion control studies and proposed treatment to the department (subdivision (8)(c) of this subsection) by July 1, 1994.

(iii) Step 3: The department shall review and either approve or reject, with written reasons, the proposed optimal corrosion control treatment in accordance with subdivision (8)(D) of this subsection by January 1, 1995. If rejected, the system shall revise proposed treatment and resubmit to the department for review by July 1, 1995.

(iv) Step 4: The system shall install the approved optimal corrosion control treatment in accordance with subdivision (8)(E) of this subsection by January 1, 1997.

(v) Step 5: The system shall complete follow-up sampling (sections 19-13-B102(e)(8)(E) and (e)(9)(C) of the Regulations of Connecticut State Agencies) by January 1, 1998.

(vi) Step 6: The department shall review installation of treatment and designate optimal water quality control parameters in accordance with subdivision (8)(F) of this subsection by July 1, 1998.

(vii) Step 7: The system shall operate in compliance with the department-specified optimal water quality control parameters (subdivision (8)(G) of this subsection) and continue to conduct tap sampling (sections 19-13-B102(e)(8)(F) and (e)(9)(D) of the Regulations of Connecticut State Agencies).

(E) Treatment steps and deadlines for small water systems and medium-size water systems. Except as provided in subparagraph (B) of this subdivision, small water systems and medium-size water systems shall complete the following corrosion control treatment steps (described in the referenced portions of subdivision (8) of this subsection and sections 19-13-B102(e)(8) and (9) of the Regulations of Connecticut State Agencies) by the indicated time periods.

(i) Step 1: The system shall conduct initial tap sampling in accordance with sections 19-13-B102(e)(8)(D) and (e)(9)(B) of the Regulations of Connecticut State Agencies until the system either exceeds the lead or copper action level or becomes eligible for reduced monitoring under section 19-13-B102(e)(8)(G) of the Regulations of Connecticut State Agencies. A water system exceeding the lead or copper action level shall propose optimal corrosion control treatment in accordance with subdivision (8)(A) of this subsection within six (6) months after the end of the tap monitoring period, pursuant to section 19-13-B102(e)(8)(D) through (G) of the Regulations of Connecticut State Agencies, in which the exceedance occurred.

(ii) Step 2: Within twelve (12) months after a water system exceeds the lead or copper action level, the department may require the system to perform corrosion control studies in accordance with subdivision (8)(B) of this subsection. If the department does not require the system to perform such studies, the department shall review and either approve or reject with written reasons the optimal corrosion control treatment in accordance with subdivision (8)(D) of this subsection proposed in step 1 and the system shall obtain department approval for its proposed optimal corrosion control treatment within the following time frames: for medium-size systems, within eighteen (18) months after it exceeds the lead or copper action level; for small systems, within twenty-four (24) months after such system exceeds the lead or copper action level.

(iii) Step 3: If the department requires a water system to perform corrosion control studies under (ii) of this subparagraph, the system shall complete the studies in accordance with subdivision (8)(C) of this subsection and propose optimal corrosion control treatment within eighteen (18) months after the department requires that such studies be conducted.

(iv) Step 4: If the water system has performed corrosion control studies under (ii) of this subparagraph, the department shall review and either approve or reject with written reasons optimal corrosion control treatment in accordance with subdivision (8)(D) of this subsection. The system shall obtain department approval for its proposed optimal corrosion control treatment within six (6) months after completion of (iii) of this subparagraph.

(v) Step 5: The water system shall install and have operational the approved optimal corrosion control treatment (subdivision (8)(E) of this subsection) within twenty-four (24) months after the department approves such treatment.

(vi) Step 6: The water system shall complete follow-up sampling in accordance with sections 19-13-B102(e)(8)(E) and (e)(9)(C) of the Regulations of Connecticut State Agencies within thirty-six (36) months after the department approves optimal corrosion control treatment.

(vii) Step 7: The department shall review the water system's installation of treatment and designate optimal water quality control parameters in accordance with subdivision(8)(F)of this subsection within six (6) months after completion of (vi) of this subparagraph.

(viii) Step 8: The water system shall operate in compliance with the department-designated optimal water quality control parameters (subdivision (8)(G) of this subsection) and continue to conduct tap sampling in accordance with sections 19-13-B102(e)(8)(F) and (e)(9)(D) of the Regulations of Connecticut State Agencies.

(8) Description of corrosion control treatment requirements. Each system shall complete the corrosion control treatment requirements described in this subdivision that are applicable to such system under subdivision (7) (A) of this subsection.

(A) Water system's proposal regarding corrosion control treatment. Based upon the results of lead and copper tap monitoring and water quality parameter monitoring, small water systems and medium-size water systems exceeding the lead or copper action level shall propose installation of one (1) or more of the corrosion control treatments in subparagraph (C) (i) of this subdivision. The department may require the system to conduct additional water quality parameter monitoring in accordance with subsection (e) (9) (B) of this section to assist the department in reviewing the system's proposal.

(B) Department's decision to require studies of corrosion control treatment (applicable to small water systems and medium-size water systems). The department may require any small water systems or medium-size water system that exceeds the lead or copper action level to perform corrosion control studies under subparagraph (C) of this subdivision to identify optimal corrosion control treatment for the water system.

(C) Performance of corrosion control studies.

(i) Any public water system performing corrosion control studies shall evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that system, alkalinity and pH adjustment, calcium hardness adjustment, and the addition of a phosphate or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.

(ii) The water system shall evaluate each of the corrosion control treatments using either pipe rig/loop tests, metal coupon tests, partial-system tests, or analyses based on documented analogous treatments with other systems of similar size, water chemistry and distribution system configuration.

(iii) The water system shall measure the following water quality parameters in any tests conducted under this subparagraph before and after evaluating the corrosion control treatments listed above: lead, copper, pH, alkalinity, calcium, conductivity, orthophosphate (when an inhibitor containing a phosphate compound is used), silicate (when an inhibitor containing a silicate compound is used), water temperature.

(iv) The water system shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and document such constraints with at least one (1) of the following: data and documentation showing

that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water system with comparable water quality characteristics; and/or data and documentation demonstrating that the water system has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes.

(v) The water system shall evaluate the effect of the chemicals used for corrosion control treatment on other water quality treatment processes.

(vi) On the basis of an analysis of the data generated during each evaluation, the water system shall propose to the department in writing the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that system. The water system shall provide a rationale for its proposal along with all supporting documentation specified in this subparagraph.

(D) Department review of optimal corrosion control treatment.

(i) Based upon consideration of available information including, where applicable, studies performed under subparagraph (C) of this subdivision and a water system's proposed treatment alternative, the department shall either approve or reject with written reasons the corrosion control treatment option proposed by the system. If rejected, the water system shall propose an alternative corrosion control treatment(s) from among those listed in subparagraph (c)(i) of this subdivision, or revise the original proposal based on the department's recommendations, and then resubmit for department review in consideration for approval.

(ii) The department shall notify the system of its decision on optimal corrosion control treatment in writing and explain the basis for this determination. If the department requests additional information to aid its review, the water system shall provide the information.

(E) Installation of optimal corrosion control. Each system shall properly install and operate throughout its distribution system the optimal corrosion control treatment approved by the department under subparagraph (D) of this subdivision.

(F) Department review of treatment and specification of optimal water quality control parameters. The department shall evaluate the results of all lead and copper tap samples and water quality parameter samples submitted by the water system and determine whether the system has properly installed and operated the optimal corrosion control treatment approved by the department in accordance with subparagraph (D) of this subdivision. After the department reviews the results of tap water and water quality parameter monitoring by the system, both before and after the system installs optimal corrosion control treatment, the system shall operate in accordance with specific parameter values defined by the department that are within the following water quality parameter ranges, unless the water system can demonstrate to the satisfaction of the department that other measurable parameter values are necessary for optimal corrosion control treatment:

(i) For pH measured at each entry point to the distribution system, a range of seven (7.0) to ten (10.0) must be maintained;

(ii) A minimum pH value, measured in all tap samples. Such value shall be equal to or greater than seven (7.0), unless the department determines that meeting a pH level of 7.0 is not technologically feasible or is not necessary for the system to optimize corrosion control;

(iii) If a corrosion inhibitor is used, concentrations for the inhibitor, measured at each entry point to the distribution system and in all tap samples, shall be maintained within the following ranges:

Corrosion Inhibitor	Range (mg/l)
Silicates	2.0 - 12.0
Orthophosphate	0.1 - 10.0

(iv) If alkalinity is adjusted as part of optimal corrosion control treatment, a range of concentrations for alkalinity, measured at each entry point to the distribution system and in all tap samples, shall be determined based on the results of tap water and water quality parameter monitoring;

(v) If calcium carbonate stabilization is used as part of corrosion control, a range of concentrations for calcium, measured in all tap samples, shall be determined based on the results of tap water and water quality parameter monitoring.

(vi) The values for the applicable water quality control parameters listed in this subparagraph shall be those that the department determines to reflect optimal corrosion control treatment for the system. The department may designate values for additional water quality control parameters determined by the department to reflect optimal corrosion control for the system. The department shall notify the system in writing of these determinations and explain the basis for its decisions.

(G) All systems optimizing corrosion control shall continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the department under section 19-13-B102(j)(8)(F) of the Regulations of Connecticut State Agencies, in accordance with this subparagraph for all samples collected under sections 19-13-B102(e)(9)(D) through (F), inclusive, of the Regulations of Connecticut State Agencies. Compliance with the requirements of this subparagraph shall be determined every six months, as specified under section 19-13-B102(e)(9)(D) of the Regulations of Connecticut State Agencies. A water system is out of compliance with the requirements of this subparagraph for a six (6) month period if it has excursions for any department-specified parameter on more than nine (9) days during the period. An excursion occurs whenever the daily value for one or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the department. Daily values are calculated as indicated in subclauses (i) through (iii) of this subparagraph. The department has discretion to delete results of obvious sampling errors from this calculation.

(i) On days when more than one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day, regardless of whether they are collected through continuous monitoring, grab sampling, or a combination of both.

(ii) On days when only one measurement for the water quality parameter is collected at the sampling location, the daily value shall be the result of that measurement.

(iii) On days when no measurement is collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality parameter was measured at the sample site.

(H) Modification of department treatment decisions. Upon its own initiative or in response to a request by a water system or other interested party, the department may modify its determination of the optimal corrosion control treatment under subparagraph (D) of this subdivision or optimal water quality control parameters under subparagraph (F) of this subdivision. A request for modification by a system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The department may modify its

determination where it concludes that such change is necessary to ensure that the system continues to optimize corrosion control treatment. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the department's decision, and provide an implementation schedule for completing the treatment modifications.

(9) Source water treatment requirements. Systems shall complete the applicable source water monitoring and treatment requirements by the following deadlines.

(A) Deadlines for completing source water treatment steps.

(i) Step 1: A system exceeding the lead or copper action level shall complete lead and copper source water monitoring in accordance with section 19-13-B102(e)(10)(B) of the Regulations of Connecticut State Agencies and make a treatment proposal to the department in accordance with subparagraph (9)(B)(i) of this subsection within six (6) months after exceeding the lead or copper action level.

(ii) Step 2: The department shall make a determination regarding source water treatment in accordance with subparagraph (9)(B)(ii) of this subsection within six (6) months after submission of monitoring results in (i).

(iii) Step 3: If the department requires installation of source water treatment, the system shall install the treatment in accordance with subparagraph (9)(B)(iii) of this subsection within twenty four (24) months after completion of (ii).

(iv) Step 4: The system shall complete follow-up tap water monitoring in accordance with section 19-13-B102(e)(8)(E) of the Regulations of Connecticut State Agencies and source water monitoring in accordance with section 19-13-B102(e)(10)(C) of the Regulations of Connecticut State Agencies within thirty six (36) months after completion of (ii).

(v) Step 5: The department shall review the system's installation and operation of source water treatment and specify maximum permissible source water levels in accordance with subparagraph(9)(B)(iv)of this subsection within six (6) months after completion of (iv).

(vi) Step 6: The system shall operate in compliance with the department-specified maximum permissible lead and copper source water levels in accordance with subparagraph (9)(B)(v)of this subsection and continue source water monitoring in accordance with section 19-13-B102(e)(10)(D) of the Regulations of Connecticut State Agencies.

(B) Description of source water treatment requirements.

(i) Water system treatment proposal. Any water system that exceeds the lead or copper action level shall propose in writing to the department the installation and operation of one (1) of the source water treatments listed in subparagraph (B) (ii) of this subdivision. A water system may propose that no treatment be installed based upon a demonstration that source water treatment is not necessary to minimize lead and copper levels at users' taps.

(ii) Department determination regarding source water treatment. The department shall complete an evaluation of the results of all source water samples submitted by the water system to determine whether source water treatment is necessary to minimize lead or copper levels in water delivered to users' taps. If the department determines that treatment is needed, the department shall review and either approve or reject with written reasons the installation and operation of the source water treatment proposed by the system. If rejected, the water system shall propose, in consideration for approval, the installation and operation of another source water treatment from among the following: ion exchange, reverse osmosis, lime softening or coagulation/filtration; or revise the original proposal based upon the department's

recommendations and resubmit this to the department for review in consideration for approval. If the department requests additional information to aid in its review, the water system shall provide the information by the date specified by the department in its request. The department shall notify the water system in writing of its determination and set forth the basis for its decision.

(iii) Installation of source water treatment. Each water system shall properly install and operate the source water treatment approved by the department under subparagraph (B) (ii) of this subdivision.

(iv) Department review of source water treatment and specification of maximum permissible source water levels. The department shall review the source water samples taken by the system both before and after the system installs source water treatment, and determine whether the water system has properly installed and operated the source water treatment approved by the department. Based upon its review, the department shall designate the maximum permissible lead and copper concentrations for finished water entering the distribution system. Such levels shall reflect the contaminant removal capability of the treatment properly operated and maintained. The department shall notify the water system in writing and explain the basis for its decision.

(v) Continued operation and maintenance. Each water system shall maintain lead and copper levels below the maximum permissible concentrations designated by the department at each sampling point monitored in accordance with subsection (e) (10) of this section. The system is out of compliance with this subparagraph if the level of lead or copper at any sampling point is greater than the maximum permissible concentration designated by the department.

(vi) Modification of department treatment decisions. Upon its own initiative or in response to a request by a water system or other interested party, the department may modify its determination of the source water treatment under subparagraph (B) (ii) of this subdivision, or maximum permissible lead and copper concentrations for finished water entering the distribution system under subparagraph (B) (iv) of this subdivision. A request for modification by a system or other interested party shall be in writing, explain why the modification is appropriate, and provide supporting documentation. The department may modify its determination where it concludes that such change is necessary to ensure that the system continues to minimize lead and copper concentrations in source water. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the department's decision, and provide an implementation schedule for completing the treatment modifications.

(j)(10) Lead service line replacement requirements.

(A) Water systems that fail to meet the lead action level in tap samples taken pursuant to section 19-13-B102(e)(8)(E) of the Regulations of Connecticut State Agencies, after installing corrosion control or source water treatment, whichever sampling occurs later, shall replace lead service lines in accordance with the requirements of this subdivision. If a water system is in violation of subdivisions (7) or (9) of this subsection for failure to install source water or corrosion control treatment, the department may require the water system to commence lead service line replacement under this subdivision after the date by which the water system was required to conduct monitoring under section 19-13-B102(e)(8)(E) of the Regulations of Connecticut State Agencies has passed.

(B) A water system shall annually replace at least seven percent (7%) of the initial number of lead service lines in its distribution system. The initial number of

lead service lines is the number of lead lines in place at the time the replacement program begins. The water system shall identify the initial number of lead service lines in its distribution system, including an identification of the portion(s) owned by the system, based on a materials evaluation, including the evaluation required under section 19-13-B102(e)(8)(A) of the Regulations of Connecticut State Agencies and relevant legal documents such as, contractual agreements, local land records and local land ordinances regarding the portion owned by the system. The first year of lead service line replacement shall begin on the date the action level has exceeded in tap sampling referenced in subparagraph (A) of this subdivision.

(C) A water system is not required to replace an individual lead service line if the lead concentration in all service line samples from that line, taken pursuant to section 19-13-B102(e)(8)(B)(iii) of the Regulations of Connecticut State Agencies, is less than or equal to 0.015 mg/l.

(D) A water system shall replace that portion of the lead service line that it owns. In cases where the system does not own the entire lead service line, the system shall notify the owner of the line, or the owner's authorized agent, that the system will replace the portion of the service line that it owns and shall offer to replace the owner's portion of the line. A system is not required to bear the cost of replacing the privately-owned portion of the line, nor is it required to replace the privately-owned portion where the owner chooses not to pay the cost of replacing the privately-owned portion of the line, or where replacing the privately-owned portion would be precluded by state, local or common law. A water system that does not replace the entire length of the service line also shall complete the following tasks.

(i) at least forty-five (45) days prior to commencing with the partial replacement of a lead service line, the water system shall provide notice to the resident(s) of all buildings served by the line, explaining that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumers can take to minimize their exposure to lead. The department may allow the water system to provide notice less than forty-five (45) days prior to commencing partial lead service line replacement where such replacement is in conjunction with emergency repairs. In addition, the water system shall inform the resident(s) served by the line that the system will, at the system's expense, collect a sample, from each partially-replaced lead service line that is representative of the water in the service line for, analysis of lead content, as prescribed under section 19-13-B102(e)(8)(B)(iii) of the Regulations of Connecticut State Agencies, no later than seventy-two (72) hours after the completion of the partial replacement of the service line. The system shall collect the sample and report the results of the analysis to the owner and the resident(s) served by the line no later than three (3) business days after receiving the results. Mailed notices post-marked no later than three (3) business days after receiving the results shall be considered "on time."

(ii) the water system shall provide, by mail or by other methods approved by the department, the information required by section 19-13-B102 (j)(10)(D)(1) of Regulations of Connecticut State Agencies, to the residents of individual dwellings. In instances where multi-family dwellings are served by the line, the water system shall have the option to post the information at a conspicuous location.

(E) The department shall require a system to replace lead service lines on a shorter schedule than that required by this subdivision, taking into account the number of lead service lines in the water system, where such a shorter replacement schedule is feasible. The department shall make this determination in writing and notify the system of its finding within six (6) months after the system is triggered into lead

service line replacement based on monitoring referenced in subparagraph (A) of this subdivision.

(F) Any system may cease replacing lead service lines whenever first-draw samples collected pursuant to section 19-13-B102(e)(8)(F) of the Regulations of Connecticut State Agencies meet the lead action level during each of two (2) consecutive monitoring periods and the system submits the results to the department. If first-draw tap samples in any such water system thereafter exceed the lead action level, the system shall recommence replacing lead service lines, pursuant to subparagraph (B) in this subdivision.

(G) To demonstrate compliance with subparagraphs (A) through (D) of this subdivision, a system shall report to the department the information specified in section 19-13-B102(h)(5)(E) of the Regulations of Connecticut State Agencies.

(11) Treatment technique for control of disinfection byproduct precursors

For systems using conventional filtration treatment that are required to comply with subdivision (2) of this subsection, enhanced coagulation or enhanced softening are identified as treatment techniques to control the level of disinfection byproduct precursors in drinking water treatment and distribution systems.

(A) Applicability

Systems using conventional filtration treatment that are required to comply with subdivision (2) of this subsection shall operate with enhanced coagulation or enhanced softening to achieve the TOC percent removal levels specified in subparagraph (C) of this subdivision, unless the system meets at least one of the alternative compliance criteria listed in this subparagraph. Systems may use the alternative compliance criteria listed in subclauses (i) through (vi) of this subparagraph to comply with this subdivision and in lieu of complying with subparagraph (B) of this subdivision. In all cases Systems shall still comply with monitoring requirements specified in section 19-13-B102(e)(11)(E) of the Regulations of Connecticut State Agencies.

(i) The system's source or treated water TOC level is less than 2.0 MG/L, calculated quarterly as a running annual average.

(ii) The system's source water TOC level is less than 4.0 MG/L, calculated quarterly as a running annual average; the source water alkalinity is greater than 60 MG/L (as CaCO₃), calculated quarterly as a running annual average; and either the TTHM and HAA5 running annual averages are no greater than 0.040 MG/L and 0.030 MG/L, respectively or prior to the effective date for compliance in section 19-13-B102(e)(11)(A) of the Regulations of Connecticut State Agencies, the system has made a clear and irrevocable financial commitment to use technologies that will limit the levels of TTHM and HAA5 to no more than 0.040 MG/L and 0.030 MG/L, respectively, as described in 40 CFR 141.135(a)(2)(iii).

(iii) The TTHM and HAA5 running annual averages are no greater than 0.040 MG/L and 0.030 MG/L, respectively, and the system uses only chlorine for primary disinfection and maintenance of a residual in the distribution system.

(iv) The system's source water (prior to any treatment) or finished water SUVA is less than or equal to 2.0 L/MG-M, measured monthly and calculated quarterly as a running annual average.

(v) the treated water alkalinity of a system with an enhanced softening is less than 60 MG/L (as CaCO₃), measured monthly and calculated quarterly as a running annual average.

(vi) The treated water of a system with an enhanced softening demonstrates a removal of at least 10 MG/L of magnesium hardness (as CaCO₃), measured monthly and calculated quarterly as a running annual average.

(B) Enhanced coagulation and enhanced softening performance requirements

Systems shall achieve the percent reduction of TOC specified in subclause (i) of this subparagraph between the source water and the combined filter effluent, unless the state approves in writing a system's request for alternate minimum TOC removal (Step 2) requirements under subclause (ii) of this subparagraph.

(i) Required Step 1 TOC reductions, indicated in the following table, are based upon specified source water parameters. Systems practicing softening are required to meet the Step 1 TOC reductions in the far-right column (Source water alkalinity >120 MG/L) for the specified source water TOC:

Step 1 required removal of TOC by enhanced coagulation and enhanced softening

Source Water TOC, mg/l	Source Water Alkalinity, mg/l as CaCO ₃		
	0-60	>60-120	>120 ¹
>2.0-4.0	35.0%	25.0%	15.0%
>4.0-8.0	45.0%	35.0%	25.0%
>8.0	50.0%	40.0%	30.0%

¹ Systems practicing softening shall meet the TOC removal requirements in this column.

(ii) A system that cannot achieve the Step 1 TOC removals required by subclause (i) of this subparagraph due to water quality parameters or operational constraints shall apply to the department, no later than three (3) months after failure to achieve the TOC removals required by subclause (i) of this subparagraph, for approval of alternative minimum TOC (Step 2) removal requirements submitted by the system. If the department approves the alternative minimum TOC removal (Step 2) requirements, the department may make those requirements retroactive for the purposes of determining compliance. Until the department approves the alternate minimum TOC removal (Step 2) requirements, the system shall meet the Step 1 TOC removals contained in subclause (i) of this subparagraph. Alternate minimum TOC removal (Step 2) requirements shall be determined in accordance with 40 CFR 141.135(b)(4).

(C) Compliance calculations

Systems using conventional filtration treatment that are required to comply with subdivision (2) of this subsection, other than those identified in subparagraph (A) of this subdivision, shall comply with requirements contained in subparagraph (B) of this subdivision. Systems shall calculate compliance quarterly, beginning after the system has collected twelve (12) months of data, by determining an annual average using the following method:

(i) Determine actual monthly TOC percent removal, equal to: $(1 - (\text{treated water TOC}/\text{source water TOC})) \times 100$;

(ii) Determine the required monthly TOC percent removal, from either the table in subparagraph (B)(i) of this subdivision or from subparagraph (B)(ii) of this subdivision;

(iii) Divide the value in (i) by the value in (ii);

(iv) Add together the results of (iii) for the last twelve (12) months and divide by 12; and

(v) If the value calculated in (iv) is less than 1.00, the system is not in compliance with the TOC percent removal requirements.

(D) Systems may use the provisions in subclauses (i) through (v) of this subparagraph in lieu of the calculations in subparagraph (C) of this subdivision to determine compliance with TOC percent removal requirements.

(i) In any month that the system's treated or source water TOC level is less than 2.0 MG/L, the system may assign a monthly value of 1.0 (in lieu of the value calculated in subparagraph (C)(iii) of this subdivision) when calculating compliance under the provisions of subparagraph (C) of this subdivision.

(ii) In any month that a system practicing softening removes at least 10 MG/L of magnesium hardness (as CaCO₃), the system may assign a monthly value of 1.0 (in lieu of the value calculated in subparagraph (C)(iii) of this subdivision) when calculating compliance under the provisions of subparagraph (C) of this subdivision.

(iii) In any month that the system's source water SUVA, prior to any treatment, is less than or equal to 2.0 L/MG-M, the system may assign a monthly value of

1.0 (in lieu of the value calculated in subparagraph (C)(iii) of this subdivision) when calculating compliance under the provisions of subparagraph (C) of this subdivision.

(iv) In any month that the system's finished water SUVA is less than or equal to 2.0 L/MG-M, the system may assign a monthly value of 1.0 (in lieu of the value calculated in subparagraph (C)(iii) of this subdivision) when calculating compliance under the provisions of subparagraph (C) of this subdivision.

(v) In any month that a system practicing enhanced softening lowers alkalinity below 60 MG/L (as CaCO₃), the system may assign a monthly value of 1.0 in lieu of the value calculated in subparagraph (C)(iii) of this subdivision when calculating compliance under the provisions of subparagraph (C) of this subdivision.

(vi) Systems may also comply with the requirements of this section by meeting the criteria in subparagraph (A) of this subdivision.

(k) **Variations and exemptions.** Variations and Exemptions from the MCL for total coliforms of subparagraph 19-13-B102 (e) (6) (B) of the Regulations of Connecticut State Agencies may be granted by the department for systems that demonstrate to the satisfaction of the department that the violation of the total coliform MCL is due to a persistent growth of total coliforms in the distribution system rather than fecal or pathogenic contamination, a treatment lapse or deficiency, or a problem in the operation or maintenance of the distribution system. The department shall use the following criteria to identify systems that could operate under a variance without posing an unreasonable risk to health:

(1) Over the past thirty (30) days, water entering the distribution system is shown to:

(A) Be free from fecal coliform or E.coli occurrence based on at least daily sampling;

(B) contain less than one (1) total coliform per hundred (100) milliliters of influent water in at least ninety five percent (95%) of all samples based on at least daily sampling;

(C) Comply with the total turbidity requirements of Section 19-13-B102 (j);

(D) Contain a continuous disinfection residual of at least 0.2 mg/l;

(2) The system has had no waterborne disease outbreak while operated in its present configuration;

(3) The system maintains biweekly contact with the department and local health departments to assess illness possibly attributable to microbial occurrence in the public drinking water system;

(4) The system has evaluated, on a monthly basis, at least the number of samples specified in Section 19-13-B102 (e) and has not had an E.coli-positive compliance sample within the last six months, unless the system demonstrates to the department that the occurrence is not due to contamination entering the distribution system;

(5) The system has undergone a sanitary survey conducted by a party approved by the department within the past twelve (12) months;

(6) The system has a cross connection control program acceptable to the department and performs an audit of the effectiveness program;

(7) The system agrees to submit a biofilm control plan to the department within twelve (12) months of the granting of the first request for a variance;

(8) The system monitors general distribution system bacterial quality by conducting heterotrophic bacteria plate counts on at least a weekly basis at a minimum of ten percent (10%) of the number of total coliform sites specified for that system size in Section 19-13-B102 (e); and

(9) The system conducts daily monitoring at distribution system sites approved by the department and maintains a detectable disinfectant residual at a minimum of ninety five percent (95%) of those points and a heterotrophic plate count of less than five hundred (500) colonies per ml at sites without a disinfectant residual.

(I) Record maintenance.

(1) Any owner or operator of a public water system subject to the provisions of this section shall retain on its premises or at a convenient location near its premises the following records,

(A) Records of all bacteriological analyses shall be kept for not less than five (5) years. Records of chemical analyses shall be kept for not less than ten (10) years. Actual laboratory reports may be kept; or data may be transferred to tabular summaries, provided that the following information is included:

(i) the date, place and time of sampling, and the name of the person who collected the sample;

(ii) identification of the sample as to whether it was a routine distribution system sample, check sample, raw or processed water sample or other special purpose sample;

(iii) date of analysis;

(iv) laboratory and person responsible for performing analysis;

(v) the analytical technique/method used; and

(vi) the results of the analysis.

(B) Records of action taken by the system to correct violations of primary drinking water regulations, shall be kept for a period not less than three (3) years after the last action taken with respect to the particular violation involved.

(C) Copies of any written reports, summaries or communications relating to sanitary surveys of the system conducted by the system itself, by a private consultant, or by any local, state or federal agency, shall be kept for a period not less than ten (10) years after completion of the sanitary survey involved.

(D) Records concerning a variance or exemption granted to the system shall be kept for a period ending not less than five (5) years following the expiration of such variance or exemption.

(E) Accurate and up-to-date maps and records showing the location of all mains, valves, hydrants, service connections, and other facilities including pumps, tanks and treatment plants shall be maintained for each community water system. An integrated map of the system showing supply, treatment, pumping and storage facilities and major mains shall be filed with the department and updated at least every five (5) years.

(F) Records of each complaint received about water quality or adequacy shall be retained for each community water system and made available for inspection by the department on request. A record of the original complaint shall be kept for a period of three (3) years subsequent to the final resolution of the complaint.

(G) Recordkeeping requirements for lead and copper. Any water system subject to the requirements of this section shall retain on its premises original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, department determinations and any other information required by subsections (e)(7)(L), (e)(8) through (e)(10), (i)(6), and (j)(7) through (j)(10) of this section. Each water system shall retain the records required by this subsection for no fewer than twelve (12) years.

(H) Records of any reports, test results, correspondence or other records collected as part of the system's cross connection control program, pursuant to subsection (f) of this section, shall be kept for a period of not less than five (5) years.

(I) The system shall keep a copy of the consumer confidence report for no less than five (5) years.

(J) The system shall keep a copy of the public records for combined and individual filter turbidity measurements, as required in subsection (e)(7)(S), for not less than three (3) years.

(K) The system shall keep a copy of the public notice and certification of compliance pursuant to section 19-13-B102 (i)(8) of the Regulations of Connecticut State Agencies for no less than three (3) years.

(2) Records of each of the following decisions shall be retained by the department for five (5) years:

(A) Any decision to waive the twenty four (24) hour time limit for collecting repeat samples after a total coliform-positive routine sample; and

(B) Any decision to invalidate a total coliform-positive sample.

(3) Records of each of the following decisions shall be retained by the department in such a manner so that each system's current status may be determined by the department:

(A) Any decision to reduce the total coliform and physical parameters monitoring frequency for a community water system serving one thousand (1,000) persons or fewer to less than once per month;

(B) Any decision to reduce the total coliform and physical parameter monitoring frequency for a non-community water system using only ground water and serving one thousand (1,000) persons or fewer to less than once per quarter;

(C) Any decision to waive the twenty four (24) hour limit for taking a total coliform sample near the first service connection when the source water turbidity level exceeds one (1) NTU pursuant to section 19-13-B102(e)(7)(H)(i) of the Regulations of Connecticut State Agencies;

(D) Any decision that a non-community water system is using only protected and disinfected groundwater and therefore may reduce the frequency of its sanitary survey to less than once every five (5) years;

(E) Any decision made on records of consultation by a system concerning the modification to a disinfection practice under 40 CFR 141.172 (c), or 40 CFR 141.542, as amended January 14, 2002, with respect to disinfection benchmarking;

(F) Any decision allowing a system to use an alternative filtration technology in accordance with section 19-13-B102(j)(4)(D) of the Regulations of Connecticut State Agencies; and

(G) Any decision made on records for systems required to do a filter self assessment, comprehensive performance evaluation, or composite correction program

(4) The department shall maintain a copy of the consumer confidence reports required pursuant to section 19-13-B102(i)(10)(F) of the Regulations of Connecticut State Agencies for a period of one (1) year and the certification required pursuant to section 19-13-B102(i)(10)(G) for a period of five (5) years.

(5) The department shall retain the following records for the duration indicated:

(A) Records for turbidity measurements and other information, which are required to be reported in accordance with section 19-13-B102(h)(6)(B)(i) of the Regulations of Connecticut State Agencies, shall be retained for not less than one (1) year; and

(B) Records for disinfection residual and other parameters necessary to document disinfection effectiveness, which are required to be reported in accordance with section 19-13-B102(h)(6)(B)(ii) of the Regulations of Connecticut State Agencies, shall be retained for not less than one (1) year.

(6) The department shall maintain a copy of the public notice and the certification of compliance required to be submitted pursuant to section 19-13-B102(i)(8) for a period of three (3) years.

(m) **Emergency powers.** The state commissioner of public health may, upon receipt of information that the security of a public water system is threatened or suspicious activities are observed on or near water company land or the treatment of a public water supply is interrupted or the source of supply is damaged so as to impair the quality or the sufficiency of the supply or a contaminant is present in or is likely to enter a public water system which constitutes an imminent and substantial danger to health, take such actions and issue such orders as the commissioner may deem necessary in order to protect the health of any persons that may be affected.

(n) **Reservoir, ground water and water use monitoring.** Meters shall be provided at all sources of water supply for community water systems so that the amount of water delivered to the distribution system can be measured. Representative weekly readings of instantaneous flow rate and total quantity of water delivered over the previous week shall be taken, recorded and retained for reference. Such records shall be submitted to the department upon request. More frequent readings shall be taken upon request of the department. Any water company maintaining a reservoir shall submit records of reservoir status to the department according to a schedule specified by the department which shall include at least weekly measurements of water elevation, instantaneous usable storage capacity, reservoir withdrawals and amount of precipitation. Any water company with a ground water source in an unconsolidated unconfined aquifer shall submit records of groundwater status to the department according to a schedule specified by the department which shall include at least weekly measurements of instantaneous pumping rates and ground water elevations. A system of observation wells, approved by the department, shall be maintained to provide sufficient information on ground water elevations and ground water quality. Any water company serving more than 1,000 people or 250 service connections, and any other water company notified by the department, shall submit to the department according to a schedule specified by the department records of water use which shall include at least weekly measurements of the volume of water withdrawn from each source and for the total system. The volume of water bought from or sold to another water company, and the type of restrictions, if any, imposed on water use and at least annual records of the volume of water used and average number of customers. Forms provided by the department shall be utilized when available.

(o) The supply capacity of each community water system shall be maintained in excess of the demand of the system, with sufficient margin of safety to properly allow for:

- (1) Sudden increases in consumption which may occur during a dry period.
- (2) The time required to bring new sources of supply on line.
- (3) Increases or growth in the service area which may be reasonably expected.

A plan shall be prepared for each community water system relating the safe yield and available water, as defined in sections 25-32d-1a(4) and 25-32d-1a(30) of the regulations of Connecticut State Agencies, of the supply system to the existing and projected demands of the service area. The plan shall be updated on a regular basis. If for any reason it becomes evident that the demands of the service area will exceed the supply capability of the system for a significant period of time, measures to effectively reduce consumption shall be promptly instituted for the system, and a program to provide sufficient supply capacity to meet existing and projected demands shall be implemented.

(p) Sources of supply, treatment, pumping, transmission and storage facilities of sufficient capacity shall be maintained to provide flows in excess of the maximum flows experienced in the community water system, and in individual service zones within integrated systems. Whenever peak period consumption interrupts water service to consumers under normal conditions, conservation measures that effectively reduce consumption shall be promptly instituted for the community water supply, and a program to provide sufficient supply, treatment, pumping, transmission and storage capacity to meet existing and projected peak period consumption shall be implemented.

(q) Essential water supply valves shall be maintained in operating condition.

(r) All customers served by a community water system shall be notified at least annually of an emergency telephone number which is continuously available for personal contact and reporting service problems. A crew shall be available to deal with emergencies within each community water system or a working arrangement or contract shall exist with others, such as pump installers, pipe layers, electricians or another water system for such coverage. Sufficient spare parts and clean up and disinfectant equipment shall be available. On or before January 1 of each year, or upon any change, the continuously available emergency telephone number and other methods of contact shall be reported in writing to the department.

(s) A program to reduce the amount of water which cannot be accounted for, shall be established and filed with the Department for review and approval. Such program shall include a schedule of implementation and consideration of the following elements:

- (1) Calibration of supply and main line meters.
- (2) Calibration of consumers' meters.
- (3) Pipeline flow measurements.
- (4) Leakage surveys.
- (5) Inspection of bleeders.

(Effective August 23, 1994; amended September 4, 1997, July 26, 2001, December 5, 2001, May 2, 2003, March 30, 2004; August 1, 2005)

On-Site Sewage Disposal Systems with Design Flows of 5,000 Gallons per Day or Less and Non-Discharging Toilet Systems

Sec. 19-13-B103a. Scope

These regulations establish minimum requirements for household and small commercial subsurface sewage disposal systems with a capacity of 5,000 gallons per day or less, non-discharging toilet systems and procedures for the issuance of permits or approvals of such systems by the director of health or registered sanitarian, as required by Section 25-54i (g) of the General Statutes.

(Effective August 16, 1982)

Sec. 19-13-B103b. Definitions

The following definitions shall apply for the purposes of Sections 19-13-B103c to 19-13-B103f, inclusive:

(a) "Sewage" means domestic sewage consisting of water and human excretions or other waterborne wastes incidental to the occupancy of a residential building or a non-residential building, as may be detrimental to the public health or the environment, but not including manufacturing process water, cooling water, waste water from water softening equipment, blow down from heating or cooling equipment,

water from cellar or floor drains or surface water from roofs, paved surface or yard drains.

(b) “Septic tank” means a water-tight receptacle which is used for the treatment of sewage and is designed and constructed so as to permit the settling of solids, the digestion of organic matter by detention and the discharge of the liquid portion to a leaching system;

(c) “Subsurface sewage disposal system” means a system consisting of a house sewer; a septic tank followed by a leaching system, any necessary pumps and siphons, and any ground water control system on which the operation of the leaching system is dependent.

(d) “Residential building” means any house, apartment, trailer or mobile home, or other structure occupied by individuals permanently or temporarily as a dwelling place but not including residential institutions;

(e) “Residential institution” means any institutional or commercial building occupied by individuals permanently or temporarily as a dwelling, including dormitories, boarding houses, hospitals, nursing homes, jails, and residential hotels or motels;

(f) “Nonresidential building” means any commercial, industrial, institutional, public or other building not occupied as a dwelling, including transient hotels and motels;

(g) “Impervious soil” means soil that has a minimum percolation rate slower than one inch in sixty minutes when the ground water level is at least eighteen inches below the bottom of the percolation test hole;

(h) “Suitable soil” means soil having a minimum percolation rate of one inch in one to sixty minutes when the ground water level is at least eighteen inches below the bottom of the percolation test hole;

(i) “Maximum ground water level” means the level to which ground water rises for a duration of one month or longer during the wettest season of the year;

(j) “Open watercourse” means a well defined surface channel, produced wholly or in part by a definite flow of water and through which water flows continuously or intermittently and includes any ditch, canal, aqueduct or other artificial channel for the conveyance of water to or away from a given place, but not including gutters for storm drainage formed as an integral part of a paved roadway; or any lake, pond, or other surface body of water, fresh or tidal; or other surface area intermittently or permanently covered with water.

(k) “Local director of health” means the local director of health or his authorized agent;

(l) “Technical Standards” means the standards established by the commissioner of health services in the most recent revision of the publication entitled “Technical Standards for Subsurface Sewage Disposal Systems” available from the State Department of Health Services;

(m) “Department” means the State Department of Health Services;

(n) “Gray water” means domestic sewage containing no fecal material or toilet wastes.

(o) “Drawdown area” means the area adjacent to a well in which the water table is lowered by withdrawal of water from the well by pumping at a rate not exceeding the recharge rate of the aquifer.

(Effective August 16, 1982)

Sec. 19-13-B103c. General provisions

(a) All sewage shall be disposed of by connection to public sewers, by subsurface sewage disposal systems, or by other methods approved by the Commissioner of Health Services, in accordance with the following requirements.

(b) All sewers, subsurface sewage disposal systems, privies and toilet or sewage plumbing systems shall be kept in a sanitary condition at all times and be so constructed and maintained as to prevent the escape of odors and to exclude animals and insects.

(c) The contents of a septic tank, subsurface sewage disposal system or privy vault shall only be disposed of in the following manner.

(1) If the contents are to be disposed of on the land of the owner, disposal shall be by burial or other method which does not present a health hazard or nuisance; or

(2) If the contents are to be disposed of on land of other than the owner;

(A) The contents shall be transferred and removed by a cleaner licensed pursuant to Connecticut General Statutes § 20-341, and

(B) Only on the application for and an issuance of a written permit from the local director of health in accordance with the provisions of this section;

(3) If the contents are to be dispersed on a public water supply water shed, only on the application and issuance of a written permit by the Commissioner of Health Services in accordance with the provisions of this section.

Each application for a permit under (c) (2) and (3) shall be in writing and designate where and in what manner the material shall be disposed of.

(d) All material removed from any septic tank, privy, sewer, subsurface sewage disposal system, sewage holding tank, toilet or sewage plumbing system shall be transported in water-tight vehicles or containers in such a manner that no nuisance or public health hazard is presented. All vehicles used for the transportation of such material shall bear the name of the company or licensee and shall be maintained in a clean exterior condition at all times. No defective or leaking equipment shall be used in cleaning operations. All vehicles or equipment shall be stored in a clean condition when not in use. Water used for rinsing such vehicles or equipment shall be considered sewage and shall be disposed of in a sanitary manner approved by the local director of health.

(e) Septic tanks shall be cleaned by first lowering the liquid level sufficiently below the outlet to prevent sludge or scum from overflowing to the leaching system where it could cause clogging and otherwise damage the system. Substantially all of the sludge and scum accumulation shall be removed whenever possible, and the inlet and outlet baffles shall be inspected for damage or clogging. Cleaners shall use all reasonable precaution to prevent damaging the sewage disposal system with their vehicle or equipment. Accidental spillages of sewage, sludge or scum shall be promptly removed or otherwise abated so as to prevent a nuisance or public health hazard.

(f) No sewage shall be allowed to discharge or flow into any storm drain, gutter, street, roadway or public place, nor shall such material discharge onto any private property so as to create a nuisance or condition detrimental to health. Whenever it is brought to the attention of the local director of health that such a condition exists on any property, he shall investigate and cause the abatement of this condition.

(Effective August 16, 1982)

Sec. 19-13-B103d. Minimum requirements

(a) Each subsurface sewage disposal system shall be constructed, repaired, altered or extended pursuant to the requirements of this section unless an exception is granted in accordance with the following provisions:

(1) A local director of health may grant an exception, except with respect to the requirements of Section 19-13-B103d (d) and Technical Standard IIA, for the repair, alteration, or extension of an existing subsurface sewage disposal system where he

determines the repair, alteration or extension cannot be affected in compliance with the requirements of this section and upon a finding that such an exception is unlikely to cause a nuisance or health hazard. All exceptions granted by the local director of health shall be submitted to the Commissioner of Health Services within thirty days after issuance on forms provided by the Department.

(2) The Commissioner of Health Services may grant an exception to the requirements of Section 19-13-B103d (d) upon written application and upon a finding that:

(A) A central subsurface sewage disposal system serving more than one building is technically preferable for reasons of site limitations, or to facilitate construction, maintenance or future connection to public sewers, or;

(B) A subsurface sewage disposal system not located on the same lot as the building served is located on an easement attached thereto. Such easement shall be properly recorded on the land records and shall be revokable only by agreement of both property owners and the Commissioner of Health Services.

(3) The Commissioner of Health Services may grant an exception to the requirements of Technical Standard IIA, upon written application and upon a finding that such an exception is unlikely to pollute the well in such a manner as to cause a health hazard.

(b) **Technical standards.** Subsurface sewage disposal systems within the scope of this regulation shall be designed, installed and operated in accordance with the technical standards established in the "Technical Standards for Subsurface Sewage Disposal Systems" published by the Commissioner of Health Services. The Technical Standards shall be reviewed annually and changes to the Technical Standards shall be available on January 1st of each year.

(c) **Large subsurface disposal systems.** The Commissioner of Health Services shall approve plans for subsurface sewage disposal systems serving a building with a designed sewage flow of two thousand gallons per day or greater, and no such systems shall be constructed, repaired, altered or extended unless the plans for such systems are approved by the Commissioner in accordance with the following:

(1) Plans for the system are submitted at least twenty days prior to approval to construct by the local director of health.

(2) The plans are designed by a professional engineer registered in the State of Connecticut.

(3) The plans submitted contain:

(A) The basis of design,

(B) Soil conditions and test pit locations,

(C) Maximum ground water and ledge rock elevations,

(D) Original and finished surface contours and elevations,

(E) Property lines, and

(F) Locations of buildings, open water courses, ground and surface water drains, nearby wells and water service lines.

(d) **Location.** Each building shall be served by a separate subsurface sewage disposal system. Each such system shall be located on the same lot as the building served.

(e) **Disposal of sewage in areas of special concern.** (1) Disposal system for areas of special concern shall merit particular investigation and special design, and meet the special requirements of this subsection. The following are determined to be areas of special concern:

(A) A minimum soil percolation rate faster than one inch per minute, or

(B) Slower than one inch in thirty minutes, or

(C) Maximum ground water less than three feet below ground surface, or
(D) Ledge rock less than five feet below ground surface, or
(E) Soils with slopes exceeding twenty-five per cent, or
(F) Consisting of soil types interpreted as having severe limitations for on-site sewage disposal by most recent edition of the National Cooperative Soil Survey of the Soil Conservation Service, or

(G) Designated as wetland under the provisions of Sections 22a-36 through 22a-45 of the Connecticut General Statutes, as amended.

(H) Located within the drawdown area of an existing public water supply well with a withdrawal rate in excess of fifty gallons per minute, or within five hundred feet of land owned by a public water supply utility and approved for a future wellsite by the Commissioner of Health Services.

(2) In such areas of special concern, the local director of health may require investigation for maximum ground water level to be made between February 1 and May 31, or such other times when the ground water level is determined by the Commissioner of Health Services to be near its maximum level.

(3) (A) Plans for new subsurface systems in areas of special concern shall:

(i) Be prepared by a professional engineer registered in the State of Connecticut;
(ii) Include all pertinent information as to the basis of design, and soil conditions, test pit locations, ground water and ledge rock elevations, both original and finished surface contours and elevation, property lines, building locations, open water courses, ground and surface water drains, nearby wells and water service lines;

(iii) Demonstrate an ability to solve the particular difficulty or defect associated with the area of special concern and which caused its classification. The Commissioner or local director of health, as the case may be, may require a study of the capacity of the surrounding natural soil to absorb or disperse the expected volume of sewage effluent without overflow, breakout, or detrimental effect on ground or surface waters if in their opinion such may occur.

(B) The plans for new subsurface disposal systems in areas of special concern shall be submitted to the local director of health and the Commissioner of Health Services for a determination as to whether the requirements of the subsection have been met, except that such submission need not be made to the Commissioner of Health Services if the local director or authorized agent has been approved to review such plans by the Commissioner of Health Services in accordance with Section B103e (b). All submissions to the Commissioner of Health Services shall be made at least 20 days prior to issuance of an approval to construct by the local director of health.

(4) If application is made for the repair, alteration or extension of an existing subsurface disposal system in an area of special concern, the local director of health may require that the applicant comply with the requirement of Subdivision (3) if he determines that the contemplated repair, alteration or extension involves technical complexities which cannot reasonably be addressed by himself, his authorized agent or the system installer.

(5) While a sewage disposal system in an area of special concern is under construction, the local director of health may require that the construction, be supervised by a professional engineer registered in the State of Connecticut, if in the opinion of the local director of health it is necessary to insure conformance to the plans approved or because of the difficulties likely to be encountered. The engineer shall make a record drawing of the sewage disposal system, as installed,

which he shall submit to the local director of health prior to issuance of a discharge permit.

(6) In such areas of special concern, the Commissioner of Health Services or the local director of health who has been approved by the Commissioner to review engineering plans in areas of special concern pursuant to Section 19-13-B103e (b) may require a study of the capacity of the surrounding natural soil to absorb or disperse the expected volume of sewage effluent without overflow, breakout, or detrimental effect on ground or surface waters.

(f) **Gray water systems.** Disposal systems for sinks, tubs, showers, laundries and other gray water from residential buildings, where no water flush toilet fixtures are connected, shall be constructed with a septic tank and leaching system at least one-half the capacity specified for the required residential sewage disposal system.

(Effective August 16, 1982)

Sec. 19-13-B103e. Procedures and conditions for the issuance of permits and approvals

No subsurface sewage disposal system shall be constructed, altered, repaired or extended without an approval to construct issued in accordance with this section. No discharge shall be initiated to a subsurface sewage disposal system without a discharge permit issued in accordance with this section. Such permits and approvals shall be issued and administered by the local director of health.

(a) No permit or approval shall be issued:

(1) For any subsurface sewage system which is designed to discharge or overflow any sewage or treated effluent to any watercourse;

(2) For any new subsurface sewage disposal system until it is demonstrated to the satisfaction of the local director of health that there is a public water supply available or a satisfactory location for a water supply well complying with Sections 19-13-B51a through 19-13-B51m of the Public Health Code;

(3) For any new subsurface sewage disposal system where the soil conditions in the area of the leaching system are unsuitable for sewage disposal purposes at the time of the site investigation made pursuant to this section. Unsuitable conditions occur where the existing soil is impervious, or where there is less than four feet depth of suitable existing soil over ledge rock, two feet of which is naturally occurring soil, or where there is less than 18 inches depth of suitable existing soil over impervious soil, or where the ground water level is less than 18 inches below the surface of the ground for a duration of one month or longer during the wettest season of the year;

(4) For any new subsurface sewage disposal system where the surrounding naturally occurring soil cannot adequately absorb or disperse the expected volume of sewage effluent without overflow, breakout or detrimental effect on ground or surface water.

(b) **Approval of agents by commissioner of health services.** (1) A local director of health shall authorize only persons approved by the Commissioner of Health Services to investigate, inspect and approve plans relating to subsurface sewage disposal systems.

(2) The Commissioner of Health Services shall approve agents of the local director of health whose qualifications to investigate, inspect and approve plans relating to subsurface sewage disposal systems have been established by attending training courses and passing examinations given by the Department of Health Services, as follows:

(A) Agents who have attended training courses and passed examinations relative to Sections 19-13-B100, 19-13-B103 and 19-13-B104 of the Public Health Code and the Technical Standards shall be approved to investigate, inspect and approve all plans for subsurface sewage disposal systems except those prepared by a professional engineer registered in the State of Connecticut pursuant to Sections 19-13-B103d (c) or (e).

(B) Agents who have attended training courses and passed examinations relative to the engineering design of subsurface sewage disposal systems shall be approved to investigate, inspect and approve plans for such systems prepared by a professional engineer registered in the State of Connecticut pursuant to Section 19-13-B103d (e).

(c) **Application for permit or approval.** (1) No investigation, inspection or approval of a subsurface sewage disposal system shall be made, or permit issued without an application by the owner in accordance with the following requirements.

(2) Applications for permits shall:

(A) Be on forms identical to Form #1 in the Technical Standards; or

(B) Be on forms prepared by the local director of health and deemed by the Commissioner of Health Services as equivalent to Form #1 in the Technical Standards; and

(C) Have attached a plot plan of the lot, which shall be a surveyor's plan if available or one prepared from information on the deed or land records.

(3) All the requested information shall be provided. If the information is not provided, it shall be indicated why it is not available or the application may be determined incomplete, and be rejected.

(d) **Site investigation.** (1) The local director of health or a professional engineer registered in the State of Connecticut representing the applicant shall make an investigation of the site proposed for the subsurface sewage disposal system and report the findings and recommendations of the investigation on a form identical to Form #2 in the Technical Standards to include:

(A) A record of soil test location, measures and observations.

(B) Soil percolation results.

(C) Observations of ground water and ledge rock.

(D) A conclusion as to the suitability of the site for subsurface sewage disposal.

(E) Special requirements for design of the system, or further testing which shall be in accordance with the most recent edition of the Technical Standards.

(2) Prior to the site investigation, the applicant shall:

(A) Provide for the digging of a suitable number of percolation test holes and deep observation pits in the area of the proposed leaching system and extending at least four feet below the bottom of the proposed leaching system, at the direction of the local director of health;

(B) Provide water for performing the percolation tests;

(C) If required by the local director of health, locate by field stakes or markers the sewage disposal system, house, well or property lines.

(3) The site investigation shall be made within ten working days of application unless otherwise required by subsection 19-13-B103d (e).

(4) The local director of health shall:

(A) Assure the accuracy of the findings of soil tests and deep observation pits; and

(B) When the maximum ground water level is in doubt the local director of health shall investigate pursuant to Section 19-13-B103d (e).

(5) The size of the leaching system shall be based on the results of soil percolation tests made in the area of the proposed leaching system or on other methods of determining the soil absorption capacity in accordance with the Technical Standards.

(6) In areas of special concern, or for leaching systems with a design sewage flow of 2,000 gallons per day or greater, the local director of health may require from the applicant whatever further testing or data necessary to assure that the sewage disposal system will function properly. Further testing may be required prior to or subsequent to issuance of the approval to construct. Such tests may include permeability tests, sieve analysis or compaction tests of natural soil or fill materials, and the installation of ground water level monitoring wells, or pipes, as well as additional observation pits and soil percolation tests.

(e) **Submission of plan.** (1) Every plan for a subsurface sewage disposal system shall be submitted to the local director of health.

(2) Every plan for a subsurface sewage disposal system shall include all information necessary to assure compliance with the requirements of Section 19-13-B103d of these regulations, and contain as a minimum the following information: the location of the house sewer, the location and size of the septic tank, the location and description of the leaching system, property lines, building locations, watercourses, ground and surface water drains, nearby wells and water service lines.

(3) Where required by the local director of health under subsections 19-13-B103d (c) and (e) of these regulations, the plan shall be prepared by a professional engineer, registered in the State of Connecticut, and shall be forwarded by the local director to the Commissioner of Health Services, together with his comments and recommendations.

(4) No plan shall be submitted directly by the applicant or engineer to the Commissioner of Health Services, unless requested by the local director of health.

(f) **Approval to construct.** (1) Upon determination that the subsurface sewage disposal system has been designed in compliance with the requirements of Section 19-13-B103d of these regulations, the local director of health shall issue an approval to construct. Approvals to construct shall be valid for a period of one year from the date of their issuance and shall terminate and expire upon a failure to start construction within that period. Approvals to construct may be renewed for an additional one year period by the local director of health upon a demonstration of reasonable cause for the failure to start construction within the one year period.

(2) Each subsurface sewage disposal system shall be constructed by a person licensed pursuant to Section 20-341 of the General Statutes. Such person shall notify the local director of health at least twenty-four hours prior to commencement of construction.

(3) The Commissioner of Health Services shall approve in accordance with Subsection 19-13-B103d (c) plans for a subsurface sewage disposal system to serve a building, the design sewage flow from which is two thousand gallons a day or greater prior to issuance of an approval to construct by the local director of health.

(4) Approval to construct a subsurface sewage disposal system in an area of special concern shall not be issued until twenty days following submission of the plans to the Commissioner of Health Services in accordance with subsection 19-13-B103d (e), unless earlier approved by the Commissioner.

(g) **Inspection.** (1) The local director of health shall inspect all subsurface sewage disposal systems for compliance with Subsection 19-13-B103d and the approved plans for construction prior to covering and at such other times as deemed necessary.

(2) After construction, and prior to covering, the subsurface sewage disposal system installer shall notify the local director of health the site is prepared for inspection. Such inspection shall take place as soon thereafter as feasible, but not later than two (2) working days after receipt of the request unless the owner agrees to an extension.

(3) A final inspection report shall be prepared by the local director of health on forms deemed by the Commissioner of Health Services as equivalent to Form #3 in the Technical Standards.

(4) A record plan of the sewage disposal system, as built, shall be required by the local director of health.

(h) **Permit to discharge.** (1) Upon determination that the subsurface sewage disposal system has been installed in compliance with the requirements of Section 19-13-B103d of these regulations and the approved plans, the local director of health shall issue a permit to discharge. A copy of such permit shall be sent to the local building official. No permit to discharge shall be issued until all required forms are completed and an approved as-built plan or record drawing is received.

(2) Any permit to discharge issued by the Commissioner of Health Services or a local director of health for a household or small commercial subsurface sewage disposal system with a capacity of five thousand gallons per day or less shall be deemed equivalent to a permit issued under Subsection 25-54i (b) of the Connecticut General Statutes. Such permits shall:

(A) specify the manner, nature and volume of discharge;

(B) require proper operation and maintenance of any pollution abatement facility required by such permit;

(C) be subject to such other requirements and restrictions as the commissioner deems necessary to comply fully with the purposes of this chapter and the Federal Water Pollution Control Act; and

(D) be issued on forms approved by the Commissioner of Health Services.

(3) The local director of health shall record the granting of an exception from any requirement of Section 19-13-B103d on the permit to discharge.

(i) **Enforcement.** (1) A permit to discharge to a subsurface sewage disposal system shall not be construed to permit any sewage overflow, nuisance, or similar condition or the maintenance thereof.

(2) If such a condition is found to exist, the permit to discharge may be revoked, suspended, modified or otherwise limited and any such condition is subject to an order to abate the condition pursuant to Connecticut General Statutes Section 19-79.

(j) **Records.** Copies of completed applications, investigation reports, review and inspection forms and as-built plans or record drawings of each sewage disposal system, certified as complying with this Section, shall be kept in the files of the town or health district for a minimum of ten years.

(k) **Rights of applicant.** (1) All site investigations, inspections, review of plans and issuance of permits or approvals by the local director of health shall be made without unreasonable delay.

(2) When requested in writing by the applicant, the local director of health shall designate in writing within 20 working days the requirement(s) of Section 19-13-B103d or 19-13-B103e of these regulations which prevents such investigation, inspection, review, permit or approval.

(3) Any final decision of the local director of health made in regard to these sections shall be made in writing and sent to the applicant. Any decision adverse to the applicant or which limits the application shall set forth the facts and conclusions upon which the decision is based. Such written decision shall be deemed equivalent to an order, and may be appealed pursuant to Section 19-103 of the General Statutes.

(Effective August 16, 1982)

Sec. 19-13-B103f. Non-discharging sewage disposal systems

(a) All non-discharging sewage disposal systems shall be designed, installed and operated in accordance with the Technical Standards and the requirements of this

section, unless an exception is granted by the Commissioner upon a determination that system shall provide for the proper and complete disposal and treatment of toilet wastes or gray water.

(b) **Composting toilets.** (1) The local director of health may approve the use of a large capacity composting toilet or a heat-assisted composting toilet for replacing an existing privy or failing subsurface sewage disposal system, or for any single-family residential building where application is made by the owner and occupant, and the lot on which the building will be located is tested by the local director of health and found suitable for a subsurface sewage disposal system meeting all the requirements of Section 19-13-B103d of these regulations.

(2) All wastes removed from composting toilets shall be disposed of by burial or other methods approved by the local director of health.

(c) **Incineration toilets.** The local director of health may approve the use of incineration toilets for non-residential buildings or for existing single-family residential dwellings for the purpose of abating existing sewage problems or replacing the existing non-water carriage toilets.

(d) **Chemical flush toilets and chemical privies.** (1) The local director of health may approve chemical flush toilets or chemical privies for nonresidential use where they are located outside of buildings used for human habitation. Chemical flush toilets or chemical privies located inside human habitations shall be approved by the Commissioner of Health Services and the local director of health.

(2) Liquid waste from chemical flush toilets or chemical privies shall be disposed of in a location and manner approved by the local director of health. Such liquid shall not be disposed of on a public water supply watershed or within five hundred feet of any water supply well unless approved by the Commissioner of Health Services.

(e) **Dry Vault Privies.** (1) The local director of health may approve dry vault privies for nonresidential use where they are located outside of buildings used as human habitation.

(2) Wastes removed from dry privy vaults shall be disposed of by burial or other methods approved by the local director of health.

(Effective August 16, 1982)

On-Site Sewage Disposal Systems with Design Flows Greater than 5,000 Gallons per Day

Sec. 19-13-B104a. Scope

These regulations set standards for domestic sewage disposal systems receiving flows greater than 5,000 gallons per day; community sewage systems as defined in Section 7-245, Connecticut General Statutes, which utilize land treatment and disposal, alternative on-site sewage treatment systems; and septage disposal systems which utilize land treatment and disposal.

(Effective August 16, 1982)

Sec. 19-13-B104b. Definitions

(a) “Alternative on-site sewage treatment systems” means a system serving one or more buildings on one property which utilizes a method of treatment other than a subsurface sewage disposal system and which involves a discharge to the waters of the state.

(b) “Domestic sewage” means sewage that consists of water and human excretions or other waterborne waste incidental to the occupancy of the residential build-

ings or a nonresidential building but not including manufacturing process water, cooling water, wastewater from water softening equipment, commercial laundry wastewater, blowdown from heating or cooling equipment, water from cellars or floor drains or surface water from roofs, paved surfaces or yard drains.

(c) "House sewer" means a tight sewer pipe extending from the building served by a subsurface sewage disposal system.

(d) "Land treatment and disposal" means a system which utilizes soil materials for the treatment of domestic sewage and disposes of the treated effluent by percolation into underlying soil and mixing with the groundwater.

(e) "Local Director of Health" means the local director of health or his authorized agent.

(f) "Person" means any individual, partnership, association, firm, corporation or other entity, except a municipality, and includes the federal government, the state or any instrumentality of the state and any officer or governing or managing body of any partnership, association, firm or corporation.

(g) "Septage" means any water of material withdrawn from a septic tank used to treat domestic sewage.

(h) "Subsurface sewage disposal system" means a system consisting of a house or collection sewer, a septic tank followed by a leaching system, any necessary pumps or siphons, and any groundwater control system on which the operation of the leaching system is dependent.

(Effective August 16, 1982)

Sec. 19-13-B104c. General provisions

(a) All sewers, sewage disposal systems, toilets, or sewage plumbing systems shall be kept in a sanitary condition at all times and be so constructed and maintained as to prevent the escape of odors and to exclude animals and insects. All such systems shall adhere to the requirements set forth in section 25-54i of the Connecticut General Statutes.

(b) The contents of the septic tank, subsurface sewage disposal system or privy vault shall only be disposed of in the following manner.

(1) If the contents are to be disposed of on the land of the owner, disposal shall be by burial or other method which does not present a health hazard or nuisance; or

(2) If the contents are to be disposed of on land of other than the owner;

(A) The contents shall be transferred and removed by a cleaner licensed pursuant to Connecticut General Statutes § 20-341, and

(B) Only on the application for and an issuance of a written permit from the local director of health in accordance with the provisions of this section;

(3) If the contents are to be disposed of on a public water supply watershed, only on the application and issuance of a written permit by the Commissioner of Health Services in accordance with the provisions of this section.

Each application for a permit under subdivisions (2) and (3) of subsection (b) shall be in writing and designate where and in what manner the material shall be disposed of.

(c) All material removed from any septic tank, privy, sewer, subsurface sewage disposal system, sewage holding tank, toilet or sewage plumbing system shall be transported in watertight vehicles or containers in such a manner that no nuisance or public health hazard is presented. All vehicles used for transportation of such material shall bear the name of the company or licensee and shall be maintained and a clean exterior conditions at all times. No defective or leaking equipment shall be used in cleaning operations. All vehicles or equipment shall be stored in a clean

condition when not in use. Water used for rinsing such vehicles or equipment shall be considered sewage and shall be disposed of in a sanitary manner approved by the local director of health.

(d) Septic tanks shall be cleaned by first lowering the liquid level sufficiently below the outlet to prevent sludge or scum from overflowing to the leaching system where it could cause clogging or otherwise damage the system. Substantially all of the sludge or scum accumulation shall be removed whenever possible, and the inlet and outlet baffles shall be inspected for damage or clogging. Cleaners shall use all reasonable precautions to prevent damaging the sewage disposal system with vehicles or equipment. Accidental spillages of sewage, sludge, or scum be promptly removed or otherwise abated so as to prevent a nuisance or public health hazard.

(e) No sewage shall be allowed to discharge or flow into any storm drain, gutter, street, roadway or public place, nor shall such material discharge onto any private property so as to create a nuisance or condition detrimental to health. Whenever it is brought to the attention of the local director of health that such a condition exists on any property, he shall investigate and cause the abatement of this condition.

(f) Persons who intend to conduct site investigations for the purpose of designing or constructing any septage or sewage disposal system within the scope of these regulations shall notify the local director of health of the time and place of such site investigations. Notice shall be provided to the local director of health in a timely manner to allow attendance at such site investigations by the director of health.

(g) Persons who propose sewage or septage disposal systems within the scope of this regulation shall submit plans for such systems to the Commissioner of Health Services and the local director of health. Plans shall be submitted in a timely manner to allow review and comment on such plans to be directed to the Commissioner of Environmental Protection. Such plans shall be prepared by a professional engineer registered in the State of Connecticut and shall include a report of the findings of all site investigations, the basis of design, a preliminary or final design and other information necessary for the preservation and improvement of public health.

(h) Persons who intend to construct sewage or septage disposal systems within the scope of these regulations shall file final construction plans with the local director of health at least two working days prior to the start of construction. All such systems shall be inspected during construction by the local director of health. Persons constructing such systems shall give prior notification to the local director of health of any changes which are proposed or required during construction. Persons constructing such systems shall provide the local director of health with a record drawing of the system, as-built, prior to utilizing the system.

(Effective August 16, 1982)

Sec. 19-13-B104d. Minimum requirements

(a) All sewage or septage disposal systems under the scope of these regulations shall meet the following minimum requirements necessary for the preservation and improvement of public health, unless an exception is granted by the Commissioner of Health Services upon his determination that public health shall not be impaired by such exception.

(b) All structures or facilities for the treatment or disposal of sewage or septage shall be located at least 50 feet from any open water source and 100 feet from any public supply reservoir, unless designed and constructed to prevent the leakage or overflow of raw or treated sewage to the ground or surface water.

(c) All structures, facilities or locations containing sewage or septage which is exposed to the atmosphere shall be located at least 150 feet from any school,

residential building or institution, and shall be fenced or otherwise made inaccessible to the public.

(d) The following minimum separating distances shall be maintained between any discharge or overflow of raw or treated sewage or septage to the ground waters and any drinking water supply well or spring.

<i>Required Withdrawal Rate</i>	<i>Minimum Separating Distance</i>
Under 10 gal. per minute	75 feet
10 to 50 gal. per minute	150 feet
Over 50 gal. per minute	200 feet

(e) The following minimum separating distances shall be maintained between any sewer, structure or facility for the conveyance or treatment of sewage or septage and any drinking water supply well or spring.

<i>Required Withdrawal Rate</i>	<i>Minimum Separating Distance</i>
Under 10 gal. per minute	25 feet
10 to 50 gal. per minute	75 feet
Over 50 gal. per minute	100 feet

(Effective August 16, 1982)

Toilet and Handwashing Facilities at Public Buildings, Places of Public Assembly, Places Dispensing Food and Beverage for Consumption on the Premises, and for the Patrons of Large Stores and Shopping Centers

Sec. 19-13-B105. Definitions

The following definitions shall apply for the purposes of sections 19-13-B106 to 19-13-B113, inclusive:

(a) “Public Building” means any building owned, leased or occupied by the state or any of its subdivisions, or by any town, city or borough in the state such as a courthouse, town or city hall, statehouse, or offices used for public transactions.

(b) “Places of Public Assembly” means structures where fifty (50) or more persons assemble for the purpose of discussing and acting upon some matters in which they have a common interest, transaction of some business of a common interest, religious worship, or attending a recreational, entertainment or educational event. The term shall include but not be limited to churches, chapels, meeting houses, auditoriums, assembly halls, theaters, sports complexes.

(c) “Places Dispensing Food and Beverages for Consumption on the Premises” means any place where food is prepared and intended for individual portion service to patrons, and includes the site at which individual portions are provided. The term includes but is not limited to restaurant, luncheonette and delicatessen-type operations that prepare sandwiches for individual portion service.

(d) “Large Store” (Mercantile) means a commercial establishment where goods are kept for sale, having five thousand (5,000) sq. ft. or more of space for the display of goods for patrons to purchase.

(e) “Shopping Center” or “Shopping Mall” means more than one store forming a central retail market, and situated within the same basic structure having common ownership.

(f) “Patron” means a client or customer of a large store or shopping center or place dispensing food and beverages for consumption on the premises.

(g) “Easily Cleanable” means that surfaces are readily accessible and made of such materials and finish as to be smooth and impervious to water and cleaning agents.

(Effective March 27, 1985)

Sec. 19-13-B106. Toilet and handwashing facilities

Toilet and handwashing facilities accessible to the public and separated for each sex, shall be provided at new or extensively renovated public buildings, places of public assembly, places dispensing food and beverage for consumption on the premises, and for the patrons of large stores and shopping centers in accordance with the State of Connecticut Basic Building Code, except that this regulation shall not apply to establishments constructed or altered pursuant to plans and specifications approved or building permits issued prior to October 1, 1977.

(Effective March 27, 1985)

Sec. 19-13-B107. Construction materials for fixtures

All toilets, urinals and lavatories shall be constructed of durable, easily cleanable materials and installed so that the fixture and space around it can be easily cleaned. All toilets, urinals and lavatories shall be kept in good repair, maintained in a clean condition and disinfected as necessary.

(Effective March 27, 1985)

Sec. 19-13-B108. Accommodations required

Each toilet shall occupy a separate compartment which shall be equipped with a door, inside latch, and clothes hook. Toilet rooms at places dispensing food and beverages for consumption on the premises shall have self-closing doors. Toilet paper in a holder shall be provided at all times for each toilet.

(Effective March 27, 1985)

Sec. 19-13-B109. Construction requirements

The walls of compartments, doors, or partitions between toilets may be less than the height of room walls but the top shall not be less than six feet (1830 mm) from the floor and the bottom not be more than one foot (305 mm) from the floor. The walls, floors, doors, and partitions shall be constructed of durable, easily cleanable materials. They shall be maintained in good repair and in a clean condition.

(Effective March 27, 1985)

Sec. 19-13-B110. Lighting, heating and ventilating

All toilet rooms shall be properly lighted, heated and ventilated in accordance with the requirements of the State of Connecticut Basic Building Code.

(Effective March 27, 1985)

Sec. 19-13-B111. Water requirements

The toilet room shall be provided with an adequate supply of cold and hot or tempered (warm) water. The temperature of the water shall not exceed 115° F (46° C).

(Effective March 27, 1985)

Sec. 19-13-B112. Prevention of flies and vermin

Toilet room outer openings shall be screened to prevent the entrance of flies and vermin.

(Effective March 27, 1985)

Sec. 19-13-B113. Waste receptacles

Easily cleanable receptacles shall be provided in toilet rooms for waste materials, and such receptacles in toilet rooms for women shall be covered. Individual hand towels or warm air blowers and soap shall be available at all times.

(Effective March 27, 1985)

(g) “Easily Cleanable” means that surfaces are readily accessible and made of such materials and finish as to be smooth and impervious to water and cleaning agents.

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