

“Municipality” means any city, town, township, borough or village or any agency or instrumentality of one or more thereof.

“National primary drinking water regulations” or “National Regulations” means the current primary drinking water regulations promulgated at 40 CFR Part 141 by the Administrator pursuant to the Federal Act, as such regulations are amended or supplemented from time to time.

“Nonpublic water system” means a water system that is not a public water system. A nonpublic water system includes any water system providing potable water to individual dwellings, and any water system regularly serving fewer than 15 service connections and fewer than 25 individuals.

“NSF” means National Sanitation Foundation International, Ann Arbor, Michigan.

“Permit application review fee” means the application fee assessed for a permit to construct a public community water system in accordance with N.J.A.C. 7:10-11.

“Person” means any individual, corporation, company, firm, association, joint stock company, partnership, consortium, joint venture, commercial or any other legal entity, municipality, State agency or Federal agency.

“Physical connection” means a connection between a public community water system and any unapproved water supply.

“Physical connection permit” means the permit issued pursuant to N.J.A.C. 7:10-10.

“Population served” means the population determined during the Department’s most recent inspection and/or sanitary survey conducted pursuant to N.J.A.C. 7:10-1.4.

“Potable water” means any water used, or intended to be used, for drinking and culinary purposes which is free from impurities in amounts sufficient to cause disease or harmful physiological effects, with the bacteriological and chemical quality conforming to applicable standards.

“Primary drinking water regulation” means a regulation which:

1. Applies at a minimum to public water systems;
2. Specifies contaminants which, in the judgment of the Department, may have adverse effect on the health of persons;
3. Specifies for each such contaminant either a maximum contaminant level if, in the judgment of the Department, it is economically and technologically feasible to ascertain the level of such contaminant in water in public water systems, or if, in the judgment of the Department, it is not economically and technologically feasible to ascertain the level of such contaminant, each treatment tech-

nique known to the Department which leads to a reduction in the level of such contaminant sufficient to satisfy the requirements of Section 4 of the State Act; and

4. Contains criteria and procedures to assure a supply of drinking water which dependably complies with such maximum contaminant levels, including quality control, sampling frequencies, and testing procedures to insure compliance with such levels and to insure proper operation and maintenance of the system, and requirements as to the minimum quality of water which may be taken into the system, and siting for new facilities for public water systems.

“Prior similar violation” means, for any given violation, a previous violation that:

1. Is within the same category of violation listed in N.J.A.C. 7:10-3.6(d)1, (d)2 or (d)3;
2. Has been cited by the Department in an administrative order and/or notice of civil administrative penalty assessment issued to the violator; and
3. Was not corrected within the amount of time stated in the administrative order and/or notice of civil administrative penalty assessment.

“Project construction cost” means the total estimated cost of construction contained in the engineer’s report submitted as part of the application for a permit to construct a public community water system under N.J.A.C. 7:10-11, excluding engineering, legal fees, financial fees and land acquisition costs.

“Public community water system” means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

“Public noncommunity water system” means a public water system that is not a public community water system and is either a “public nontransient noncommunity water system” or a “public transient noncommunity water system” as defined in this section.

“Public nontransient noncommunity water system” means a public water system that is not a public community water system and that regularly serves at least 25 of the same persons for more than six months in any given calendar year.

“Public transient noncommunity water system” means a public water system that is not a public community or a public nontransient noncommunity water system and that serves at least 25 transient individuals for at least 60 days in any given calendar year.

“Public water system” means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least 15

service connections or regularly serves an average of at least 25 individuals daily for at least 60 days out of the year. Such term includes any collection, treatment, storage and distribution facilities under control of the operator of such system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. A public water system is either a "public community water system" or a "public noncommunity water system" as defined in this section.

"Raw water" means untreated ground or surface water.

"Reduced pressure zone backflow preventer assembly" means a backflow prevention device which consists of two independently acting soft-seated check valves, internally force loaded to a normally closed position and separated by an intermediate chamber (or zone) in which there is an automatic relief port, which vents to atmosphere, internally loaded to a normally open position between two tightly closing shut-off valves, and which has means for testing the tightness of the check valves and opening of the relief port. A reduced pressure zone backflow preventer assembly includes a reduced pressure zone detector assembly for the purposes of this chapter.

"Safe Drinking Water Program" means the regulatory activities conducted by the Department to carry out the provisions and purposes of the State Act and portions of the Water Supply Management Act, N.J.S.A. 58:1A-1 et seq., addressing the provisions of adequate storage, emergency plans, and reducing the amount of unaccounted for water. The program also carries out regulatory activities of N.J.S.A. 58:11-9.1 et seq. controlling the interconnections between public community water systems and unapproved water systems, and establishes standards for construction and procedures for certifications pursuant to the Reality Improvement, Sewerage and Facilities Act, N.J.S.A. 58:11-23 et seq.

"Sanitary survey" means an on-site review by an authorized representative of the Department of the source(s), facilities, equipment, operation and maintenance of a public or nonpublic water system for the purpose of evaluating the adequacy of the source(s), facilities, equipment, operation and maintenance for producing and distributing safe drinking water with adequate pressure and volume.

"Second offense" means a violation for which there is only one prior similar violation.

"Secondary drinking water regulation" means a regulation applying to one or more water systems, and which specifies the recommended upper limits or optimum ranges of contaminants that are necessary to protect the public welfare. A secondary drinking water regulation may apply to any contaminant in drinking water which may adversely affect the taste, odor, or appearance of such water or which may otherwise adversely affect the public welfare.

"Spring" means a natural surface feature where ground water issues from the rock or soil onto the land or into a body of water.

"State Act" means the New Jersey Safe Drinking Water Act, N.J.S.A. 58:12A-1 et seq., as amended.

"State-regulated contaminant" means a contaminant for which the Department has set MCL and monitoring requirements, independent of the National Regulations, as mandated by the State Act.

"Supplier of water" means any person who owns or operates a public water system.

"Surface water" means water at or above the land's surface, which is neither ground water nor contained within the unsaturated zone, including, but not limited to, the ocean and its tributaries, all springs, streams, rivers, lakes, ponds, wetlands and artificial waterbodies.

"Third or subsequent offense" means a violation for which there are at least two prior similar violations.

"Unapproved water supply" means any source of water which is not part of a public community water system.

"Unconfined aquifer" means an aquifer that is either exposed to atmospheric pressure or bounded by layers of materials which do not serve as an effective barrier to water migration.

"Water system" means a system for providing potable water to any person.

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

Changed N.J.A.C. references in the introductory paragraph; and in "Public water system", rewrote the first sentence.

Amended by R.2004 d.442, effective December 6, 2004.

See: 36 N.J.R. 295(a), 36 N.J.R. 5383(b).

Added "Air gap"; in "Detectable disinfectant residual", substituted "free" for "total" following "of at least 0.05 mg/l"; and in "Nonpublic water system", substituted "and fewer than" for "or" preceding "25 individuals" at the end.

#### 7:10-1.4 Procedures for inspections and sanitary surveys of water systems

(a) An authorized Department representative(s) may conduct an on-site inspection and/or sanitary survey of any water system, and any component part thereof, and may take samples, and inspect, copy or photograph any records required to be kept pursuant to this chapter.

(b) The Department representative(s) conducting an inspection or sanitary survey pursuant to (a) above shall carry identification, and shall present it upon request.

(that is, 2002, 2005, 2008, 2011)

Year two of the three year Federal compliance period (that is, 2003, 2006, 2009, 2012)

Year three of the three year Federal compliance period (that is, 2004, 2007, 2010, 2013)

water source(s) or all PCWS serving a population greater than 10,000. All public community water systems using a groundwater source(s) serving a population equal to or less than 10,000. Public nontransient noncommunity water systems.

8. MCLs and monitoring requirements for disinfectants and disinfection by-products shall be those established under the National Regulations.

9. Action levels and monitoring requirements for lead and copper shall be those established under the National Regulations.

10. Subject to (a)10i below, MCLs and monitoring requirements for radionuclides shall be those established under the National Regulations.

i. Compliance with the MCL shall be individually determined at each sampling location including points of entry to the water distribution system, when individually directed by the Department, based on a running annual average of all quarterly sampling results from each of the sampling location.

11. The Department may allow monitoring waivers for public water systems pursuant to 40 CFR 141.23(c) and 141.24(f) and (h) of the National Regulations.

12. Subject to (a)12i below, suppliers of water from a bulk purchase system are subject only to the microbiological monitoring and lead and copper monitoring requirements of this section.

i. Effective January 1, 2004, a supplier of water from a bulk purchase system that regularly derives its water from another water system using a surface water source(s) and provides water to more than 100 service connections shall at a minimum collect a quarterly disinfection by-products sample from a point within the water distribution system with maximum residence time to be tested for Total Trihalomethanes (THM4) and Total Trihaloacetic Acids (HAA5) disinfection by-products.

13. If a supplier of water installs a treatment device or process to bring the water into compliance with any applicable MCL, the supplier of water shall monitor for that contaminant each calendar quarter (notwithstanding compliance with the applicable MCL for the contaminant).

(b) The National Regulations, at 40 C.F.R. 141.151, require each community water system to annually develop and deliver to its customers a Consumer Confidence Report (CCR) which provides information on the quality of the

water delivered by the system and characterizes the risks (if any) from exposure to contaminants detected in the drinking water in an accurate and understandable manner. In addition to the standards and requirements in the National Regulations for the development and distribution of the CCR, the following requirements shall apply:

1. Notwithstanding the provisions of the Federal Safe Drinking Water Act amendments of 1996, 42 U.S.C. §§ 300f et seq. and the National Regulations, at 40 C.F.R. 141.155, every public community water system, regardless of the number of persons served, shall mail a copy of its Consumer Confidence Report to each of its customers.

2. The statement required pursuant to 40 C.F.R. 141.154(a) (Vulnerable Populations Statement) shall be included in bold print within the header of any chart displaying levels of detection and maximum contaminant levels for contaminants included in the Consumer Confidence Report.

i. If the Consumer Confidence Report does not contain at least one chart displaying levels of detection and maximum contaminant levels, the Vulnerable Populations Statement shall be placed at the beginning of the report.

3. In addition to the reporting requirements set forth at N.J.A.C. 7:10-7.4, if, at any time during any monitoring period within the reporting year, a sample collected and analyzed pursuant to N.J.A.C. 7:10-7.3 exceeds the recommended upper limit for iron, manganese or sodium as provided at N.J.A.C. 7:10-7.2, the following language shall be included in the Consumer Confidence Report:

i. "FOR IRON: The recommended upper limit for iron is based on unpleasant taste of the water and staining of laundry. Iron is an essential nutrient, but some people who drink water with iron levels well above the recommended upper limit could develop deposits of iron in a number of organs of the body."

ii. "FOR MANGANESE: The recommended upper limit for manganese is based on staining of laundry. Manganese is an essential nutrient, and toxicity is not expected from levels which would be encountered in drinking water."

iii. "FOR SODIUM: For healthy individuals, the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be of concern to individuals on a sodium restricted diet."

4. In addition to the contaminants regulated by the National Regulations, for which the Department has either adopted by reference the Federal MCL or has adopted a lower MCL, there are five additional contaminants regulated by the Department, at N.J.A.C. 7:10-5, but not regulated by the National Regulations. The Consumer Confidence Report shall include information con-

cerning the five additional contaminants regulated in New Jersey as set forth below:

<u>Contaminant</u>	<u>New Jersey MCL<sub>1</sub> (ppb)</u>	<u>MCL in CCR units \$600</u>	<u>Major Sources in Drinking Water</u>	<u>Health Effects Language</u>
<i>meta</i> -Dichlorobenzene	600		Discharge from industrial chemical factories	Some people who drink water containing <i>meta</i> -Dichlorobenzene in excess of the MCL over many years could experience problems with their liver, kidneys or circulatory system.
1,1 Dichloroethane	50	50	Discharge from metal de-greasing sites and other factories	Some people who drink water containing 1,1 Dichloroethane in excess of the MCL over many years could experience problems with their kidneys.
Methyl tertiary butyl ether (MTBE)	70	70	Leaking underground gasoline & fuel oil tanks, gasoline and fuel oil spills	Some people who drink water containing MTBE in excess of the MCL over many years could experience problems with their kidneys.
Naphthalene	300	300	Discharge from industrial chemical factories, exposure to mothballs	Some people who drink water containing Naphthalene in excess of the MCL over many years could experience problems with cataracts and hemolytic anemia.
1,1,2,2 Tetrachloroethane	1	1	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2,2 Tetrachloroethane in excess of the MCL over many years could experience problems with their liver, kidneys and central nervous system.

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In (a), rewrote 10 and 12.

Amended by R.2003 d.193, effective May 5, 2003.

See: 34 N.J.R. 4281(a), 35 N.J.R. 1925(b).

Added (b).

Amended by R.2004 d.442, effective December 6, 2004.

See: 36 N.J.R. 295(a), 36 N.J.R. 5383(b).

In (a), rewrote 3, 4 and 7, added 13.

### 7:10-5.3 Analytical requirements

(a) The monitoring and analytical requirements for determining compliance with the maximum contaminant levels shall be those established under the National Regulations, except that the analysis for gross alpha particle activity shall be determined using the 48 Hour Rapid Gross Alpha Test, in accordance with N.J.A.C. 7:18.

(b) Any analysis required under this chapter shall be conducted at a certified laboratory, certified in accordance with N.J.A.C. 7:18, for the specific analytical method used.

(c) Each analysis shall be conducted using a method capable of achieving an MDL below the MCL for the contaminant being analyzed.

(d) A supplier of water from a public community water system, when submitting any sample analysis to the Department, shall provide the following:

1. The test result for all contaminants tested for as part of the analytical method;
2. Any test result that exceeds a specified MDL; and
3. A description of the quality control procedures followed applicable to the analysis submitted.

(e) The monitoring and analytical requirements for determining compliance with the maximum contaminant levels for the State-regulated VOCs listed in N.J.A.C. 7:10-5.2(a)4 shall be those established under the National regulations at 40 CFR 141.24.

Amended by R.2004 d.442, effective December 6, 2004.

See: 36 N.J.R. 295(a), 36 N.J.R. 5383(b).

In (a), inserted " , except that the analysis for gross particle activity shall be determined using the 48-hour Rapid Gross Alpha Test, in accordance with N.J.A.C. 7:18" at the end; added (e).

**7:10-5.4 Reporting requirements**

(a) Except where a shorter reporting period is required by the National Regulations, each supplier of water shall submit a compliance sampling report to the Department within the first 10 calendar days of the month following the month in which any test, measurement or analysis is made. The compliance sampling report, containing the sampling results for microbiological contaminants, inorganic compounds, volatile organic compounds, synthetic organic compounds, radionuclides and lead and copper analyses, shall be prepared in a format prescribed by and on forms available from and submitted to, the Department at the following address:

Bureau of Safe Drinking Water  
Water Supply Administration  
New Jersey Department of Environmental Protection  
PO Box 426  
Trenton, New Jersey 08625-0426

(b) Within 180 days after receipt of written notification from the Department, each supplier of water shall ensure that all compliance sampling reports and the monthly report required under (e) below are submitted to the Department electronically in a manner compatible with the Department's computer system.

(c) Each supplier of water from a public community water system shall report by telephone within 48 hours or on the next business day, whichever is sooner, to the Bureau of Safe Drinking Water at (609) 292-5550, the supplier's failure to comply with any primary drinking water regulation, including any failure to comply with any monitoring requirement pursuant to this subchapter. A supplier of water shall report any acute violation by telephone to the Department as soon as the supplier becomes aware of such acute violation.

(d) A supplier of water is not required to submit a compliance sampling report to the Department if the Department conducts the sampling and if the State laboratory performs the sample analysis and reports the results directly to the Department.

(e) Each supplier of water from a public community water system shall submit a monthly report consisting of the daily records maintained pursuant to N.J.A.C. 7:10-5.6 by the 10th day of the month following the month for which the records contained in the report are compiled.

(f) If a supplier of water installs a treatment device or process to bring the water into compliance with any applicable MCL, the supplier of water shall report the results of the monitoring required under N.J.A.C. 7:10-5.2(a)13 to the Department on a quarterly basis. (A noncommunity water

system supplier of water shall also submit a copy of the results to the administrative authority.)

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In (b), substituted "Within 180 days of receipt of written notification from the Department" for "Beginning on January 1, 1999" at the beginning.

Amended by R.2004 d.442, effective December 6, 2004.

See: 36 N.J.R. 295(a), 36 N.J.R. 5383(b).

Rewrote (b); added (f).

**7:10-5.5 Public notification**

(a) Each supplier of water shall provide public notification of any violation of any MCL or monitoring requirement in accordance with the National Regulations pursuant to 40 CFR 141.32.

(b) Any supplier of water from a public noncommunity water system which the administrative authority determines is not in compliance with any primary drinking water regulation, including any monitoring requirement, shall immediately post a notice of such failure in a place conspicuous to consumers in a format prescribed in the National Regulations pursuant to 40 CFR 141.32. The notice shall remain posted until the administrative authority determines that the system is restored to compliance.

**7:10-5.6 Recordkeeping**

A supplier of water shall keep and maintain all records required under the National Regulations and also maintain daily records of water pumpage, quantities of chemicals used for water treatment and routine test results.

**7:10-5.7 Remediation requirements and procedures**

(a) Except as provided pursuant to (b) below, the supplier of water that analyzes and reports pursuant to this subchapter any violation of a promulgated MCL for any of the contaminants regulated pursuant to this subchapter shall, within one year after receipt of the results of the tests conducted pursuant to the National Regulations and N.J.A.C. 7:10-5.2 that demonstrate an exceedance that constitutes a violation, take any action necessary to bring the water into compliance with the applicable MCL.

(b) The Department may require by administrative order that the supplier of water take prompt action to bring the water into compliance with the applicable MCL upon a determination that such action is necessary to abate an immediate public health threat.

(c) The Department may extend the deadline by which the supplier of water must achieve compliance with the applicable MCL after a public hearing and its determination that the extension shall not pose an imminent threat to public health, if new construction of a treatment plant is required.

(d) If the supplier of water fails to take action to bring the water into compliance with the applicable MCL pursuant to (a) above, the Department may take one or more of the following actions:

1. Seek to enjoin the supplier of water from continuing to supply water to the public;
2. Establish a program to bring the public water system into compliance;
3. Provide the customers of the public water system with an alternate potable water supply; and/or
4. Seek penalties in accordance with N.J.A.C. 7:10-3.

(e) If a supplier of water installs a treatment device or process to bring the water into compliance with any applicable MCL, the supplier of water shall at all times maintain the treatment device or process in good working order and operate the treatment device or process to ensure full compliance with the MCL. Failure to do so may result in penalties in accordance with N.J.A.C. 7:10-3.

Amended by R.2004 d.442, effective December 6, 2004.

See: 36 N.J.R. 295(a), 36 N.J.R. 5383(b).

In (a), deleted "newly" following "any violation of" and substituted "after" for "of" following "within one year"; added (e).

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SUBCHAPTER 6. (RESERVED)

## SUBCHAPTER 7. STATE SECONDARY DRINKING WATER REGULATIONS

Recommended upper limit  
5 mg/l

### 7:10-7.1 Authority, purpose and scope

This subchapter contains the Department's secondary drinking water regulations, promulgated pursuant to the State Act. These regulations apply to any contaminant in drinking water which may adversely affect the taste, odor, or appearance of such water, or which may otherwise adversely affect the public welfare. This subchapter specifies the upper limits or optimum ranges of contaminants in drinking water required to be met by any water system when the Department or the administrative authority having jurisdiction over the water system finds a need therefor. The optimum range or the upper limit for any contaminant in drinking water as specified in this subchapter is the recommended level for such a contaminant as delivered to the free-flowing outlet of the ultimate user of a public or nonpublic water system. These standards shall be met whenever a new source of water supply is constructed or added to a water system. For existing water systems, the Department may require treatment(s) to meet these standards, if the exceedance of one or more of these standards causes adverse effects on the consumers of such systems.

### 7:10-7.2 Recommended upper limits and optimum ranges for physical, chemical and biological characteristics in drinking water

(a) The following are the recommended upper limits or optimum ranges, as applicable, for the listed physical, chemical and biological characteristics in drinking water. If a physical, chemical, or biological characteristic exceeds the recommended upper limit or falls outside a recommended optimum range, the drinking water may be determined to be unacceptable if, in the judgment of the administrative authority, such characteristics either singly or in combination would render the water unduly unpalatable or aesthetically objectionable.

#### 1. Physical characteristics:

	<u>Recommended upper limit or optimum range</u>
Color	10 color units (standard cobalt scale)
pH	6.5 to 8.5 (optimum range)
Odor	3 Threshold odor number
Taste	No objectionable taste

#### 2. Chemical characteristics:

	<u>Recommended upper limit</u>
ABS/L.A.S. (1)	0.5 mg/l
Aluminum	0.2 mg/l
Chloride	250 mg/l
Fluoride (2)	2 mg/l
Hardness (as CaCO <sub>3</sub> )	250 mg/l
Iron (3)	0.3 mg/l
Manganese (3)	0.05 mg/l
Silver	0.1 mg/l
Sodium (4)	50 mg/l
Sulfate	250 mg/l
Total dissolved solids	500 mg/l

### Zinc

Notes:

- (1) Alkyl-benzene-sulfonate and linear-alkyl-sulfonate, or similar methylene blue reactive substances contained in synthetic detergents.
- (2) A range of 0.8 to 1.2 mg/l fluoride is recommended for those water supplies in which the fluoride concentration is artificially adjusted.
- (3) The limits for iron and manganese may be raised to 0.6 mg/l and to 0.1 mg/l, respectively, if a sequestering treatment is provided. However, when either of these higher limits is exceeded in the raw water of a public community water system, the water shall be treated so as to reduce the iron concentration to below 0.3 mg/l and/or the manganese concentration to below 0.05 mg/l.
- (4) Significant only for consumers requiring low sodium diet.

3. Biological characteristics: Water intended for potable purposes shall be free from:

- i. Visible organisms such as algae, algal diatoms, crustaceans, arachnids, and larvae; and
- ii. Those micro-organisms which render the water unpalatable or unaesthetic to the consumer.

### 7:10-7.3 Monitoring

(a) When a public community water system is equipped with treatment facilities specifically for pH adjustment and/or iron and/or manganese removal, the supplier of water shall conduct analyses with a minimum frequency of once daily for pH, iron or manganese, as applicable, on samples of water at the point(s) of entry to the distribution system. Such analyses need not be performed by a certified laboratory.

(b) The supplier of water from a public community water system other than a bulk purchase system shall analyze a water sample taken from each point of entry to the distribution system for the physical and chemical characteristics listed at N.J.A.C. 7:10-7.2(a) with a minimum frequency of once a year for surface water supplies and once in three years for ground water supplies. Such analyses shall be performed by a certified laboratory.

(c) The supplier of water from a public community water system shall analyze water samples from its distribution system in accordance with the following:

1. Each supplier of water serving a population equal to or greater than 10,000 shall sample for iron and manganese with a minimum frequency of once a year; and
2. Each supplier of water shall collect at a minimum one additional sample for iron and manganese once for every 50,000 population served, to a maximum of five samples per year.

(d) The Department may require the supplier of water to take more frequent samples for specific characteristics if the routine samples reveal high levels. Such samples may, with prior Department approval, be analyzed by the supplier of water rather than a certified laboratory.

(e) Any person who owns and/or operates a nonpublic water system shall sample and analyze the water for the physical and chemical characteristics listed at N.J.A.C. 7:10-7.2(a) at a frequency established by the administrative authority.

Amended by R.2000 d.354, effective August 21, 2000.  
See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).  
Rewrote (c).

#### Case Notes

Penalties were properly assessed against water company for not testing water or safely maintaining wells. Department of Environmental Protection v. Diamond Hill Estates Water Company, Inc., 96 N.J.A.R.2d (EPE) 320.

#### 7:10-7.4 Public notification

(a) Whenever the average of samples collected in any one monitoring period exceeds the recommended upper limit for iron, manganese or sodium specified at N.J.A.C. 7:10-7.2 in a public community water system, the supplier of water shall provide public notification by one of the following methods:

1. Newspaper advertisement in a daily or weekly paper serving the local area within 30 days of the exceedance;
2. Individual notification to consumers by direct mail or flyers within 90 days of the exceedance; or
3. Annual water quality report mailed to consumers provided such annual report is issued within 180 days of the exceedance.

(b) The public notification shall be repeated each calendar year that the exceedance continues.

(c) The public notification shall specify the recommended upper limit for iron, manganese or sodium exceeded, the actual level of iron, manganese or sodium in the water, a description of the potential adverse effects of the exceedance, and a description of the cause or suspected cause of the exceedance.

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## SUBCHAPTER 8. DRINKING WATER ADDITIVES

### 7:10-8.1 Purpose and scope

This subchapter contains the standards for the use or occurrence of direct and indirect additives in public water systems in order to protect against the adverse health effects of such additives. A supplier of water shall meet the requirements of this subchapter only with regard to the public water system facility and related appurtenances under the control of the supplier of water.

### 7:10-8.2 Drinking water additives

(a) The Department adopts and incorporates by reference the following ANSI/NSF standards, as amended and supplemented. The standards may be obtained from NSF International, 475 Plymouth Road, P.O. Box 130140, Ann Arbor, Michigan 48113-0140.

1. ANSI/NSF Standard 60, Drinking Water Treatment Chemicals, and
2. ANSI/NSF Standard 61, Drinking Water System Components.

i. For the purpose of this subchapter, ANSI/NSF Standard 61 shall apply only to new construction, or the modification or repair of existing facilities.

(b) Except as provided in (e) and (f) below, a supplier of water shall use only additives and drinking water system components which meet the standards listed in (a) above.

(c) A supplier of water shall use only additives certified by an organization which has been accredited by ANSI to test and certify additives. The supplier of water shall not use additives certified only by the manufacturer.

(d) The supplier of water shall maintain at the treatment plant, for a minimum period of 10 years, records of all additives used to treat the water, including additive name, certification, point of addition and quantities.

(e) If a supplier of water desires to use an additive or component which is not certified pursuant to ANSI/NSF Standard 60 or 61 and no similar additive(s) or components has been certified by any organization which has been accredited by ANSI to test and certify additives, the supplier of water may submit a request to the Department for approval to use the uncertified additive or component on a temporary basis. The request for approval must include the manufacturer's detailed product information regarding potential adverse health effects and the manufacturing and quality control data indicating the purity of the additive.

(f) Any construction materials other than drinking water system components that come in contact with a water supply are exempt from the requirements of this subchapter, subject to (g) below.

(g) The Department reserves the right to prohibit use of a construction material that it determines is detrimental to public health and/or safety when in contact with a water supply.

(h) This subchapter shall become operative May 17, 1997.

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## SUBCHAPTER 9. SURFACE WATER TREATMENT REQUIREMENTS

### 7:10-9.1 Purpose and scope

This subchapter establishes minimum treatment requirements for public water systems which use surface water or ground water under the direct influence of surface water and discretionary changes to the National Regulations, 40 CFR 141, Subpart H—Filtration and Disinfection, as adopted and incorporated by reference at N.J.A.C. 7:10-5.1.

**7:10-9.2 Discretionary changes to national surface water treatment requirements**

(a) In accordance with the discretionary authority permitted by the National Regulations, for compliance with the State primary drinking water regulations including surface water treatment requirements, the following shall apply:

1. Each supplier of water from a system that uses a surface water source or a ground water source under the direct influence of surface water must provide filtration treatment using a filtration method or methods as established under the National Regulations, 40 CFR 141.73. The Department shall grant exceptions to this requirement only for ground water sources that are determined to be under the direct influence of surface water pursuant to N.J.A.C. 7:10-9.3 and that meet the filtration avoidance criteria established under the National Regulations at 40 CFR 141.71 (a) and (b).

2. Prior to January 1, 2002, for each filtration plant which treats surface water or ground water under the direct influence of surface water, the filtered water turbidity level shall be less than or equal to 0.5 Nephelometric Turbidity Units (NTU) in at least 95 percent of each month's filter or plant effluent samples. This standard shall apply to all types of filtration treatments, including, but not limited to, conventional or direct filtration, slow sand filtration, and diatomaceous earth filtration. As provided in the National Regulations, 40 CFR 141.73, the Department may increase the turbidity standard for the filtered water for individual filtration plants to 1.0 NTU in 95 percent of each month's filter or plant effluent samples.

3. Effective January 1, 2002, for each filtration plant which treats surface water or ground water under the direct influence of surface water, the filtered water turbidity level shall be less than or equal to 0.3 Nephelometric Turbidity Units (NTU) in at least 95 percent of each month's filter or plant effluent samples. This standard shall apply to all types of filtration treatments, including, but not limited to, conventional or direct filtration, slow sand filtration, and diatomaceous earth filtration.

Amended by R.2000 d.354, effective August 21, 2000.  
See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In (a), added "Prior to January 1, 2002," at the beginning and deleted "95 percent of" following "NTU in" in the last sentence of 2. and added 3.

**7:10-9.3 Determination of ground water sources to be evaluated for direct influence of surface water**

(a) Except as provided at (b) below, each supplier of water shall monitor each raw water source for pH, turbidity, temperature, conductivity, coliform bacteria and/or particulate matter, in accordance with N.J.A.C. 7:10-9.5, if the source meets any of the following criteria:

1. The source is an infiltration gallery, spring, cistern, radial well collector or dug well;

2. The raw water quality data for the source indicates the existence of one or more of the following in the raw water: fecal coliform bacteria, Giardia cysts, or other pathogenic organisms associated with surface water;

3. The source is a well which has less than 50 feet of casing;

4. The source is a well and the annular space between the oversized borehole and the well casing is not grouted;

5. The source is located less than 200 feet horizontally from any surface water body that holds or carries water continuously for at least 60 calendar days in any year, including, but not limited to, a stream, river, brook, lake, reservoir, impoundment, pond or creek; and/or

6. The source is less than 200 feet horizontally from a source of microbial contamination which may involve a ground water discharge, including but not limited to, a septic system, cesspool, feedlot, stormwater detention basin or point discharge of highway drainage.

(b) The monitoring required pursuant to paragraph (a) above shall not apply to the sources described at (a)5 and 6 above if the supplier of water demonstrates that such source draws water from a low risk formation as defined in N.J.A.C. 7:10-1.3.

(c) By June 30, 1997, each public community water system shall submit for each source that meets the criteria in (a) above a completed Checklist for Determination of Ground Water Status to the Bureau of Safe Drinking Water in the Department. Public noncommunity water systems shall submit the checklist upon the request of the Department, where, based upon a history of noncompliance with applicable coliform standards, use of disinfectant treatment, and other physical evidence revealed by inspection, the Department determines that the system's ground water source may be at risk of contamination by surface water.

1. The Checklist shall specify the identification, location, construction, and microbiological quality of each source.

2. Any Checklist properly completed and submitted to and received by the Department prior to November 18, 1996 will be considered as complying with this subsection.

Amended by R.2000 d.354, effective August 21, 2000.  
See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).  
Rewrote (c).

**7:10-9.4 Monitoring requirements and criteria for determination for ground water sources under the direct influence of surface water**

(a) Each supplier of water that has a ground water source that meets any of the criteria in N.J.A.C. 7:10-9.3(a) shall monitor that source for a period of one year from the date of receipt of notice of such determination made pursuant to N.J.A.C. 7:10-9.3 using the procedures set forth in (b) below.

(b) During the one-year monitoring period established pursuant to (a) above, the supplier of water shall monitor the ground water source according to the sampling scheme below:

1. The supplier of water shall collect precipitation data and sample the raw water source in four series of six weekly tests, with the series separated by at least 30 calendar days and one of the series performed during the period of peak production for the source, for all of the following physical/chemical parameters:

- i. pH;
- ii. Temperature;
- iii. Turbidity;
- iv. Conductivity; and
- v. Total coliform bacteria (if a sample result is positive for total coliform, the water shall be tested for fecal coliform or *E. coli*).

2. The supplier of water shall sample the raw water source for particulate matter using Microscopic Particulates Analysis (MPA) as set forth in the U.S. Environmental Protection Agency's "Guidance Manual for Compliance with the Filtration and Disinfection Requirements For Public Water Systems Using Surface Water Sources" (dated March, 1991). A minimum of four particulate analyses shall be performed during the one-year monitoring period. The sampling shall be conducted immediately following significant precipitation events and/or during the period of peak production for the source and shall be separated by at least 60 calendar days. The analyses shall determine the presence, if any, of the following:

- i. Diatoms;
- ii. Rotifers;
- iii. Coccidia;
- iv. Insect parts and larvae;
- v. Cryptosporidium; and
- vi. Giardia cysts.

(c) If the sampling results for the physical/chemical parameters listed in (c)1 through 5 below show significant variation during the course of the one-year monitoring period established pursuant to (a) above, the supplier of water shall switch to particulate matter monitoring as described in (b)2 above for the remainder of the one-year monitoring period. If the supplier of water does not switch to particulate matter monitoring, then the raw water source will be considered by the Department to be "under the direct influence of surface water" and subject to the filtration and disinfection requirements of this subchapter. The Department considers the following variations to be "significant" for purposes of this subsection:

- 1. The turbidity of the raw water source fluctuates more than 0.5 NTU over the course of any one month;
- 2. The turbidity of the raw water source exceeds 1.0 NTU at any time;
- 3. The temperature of the raw water source fluctuates in excess of five degrees Fahrenheit over the course of any one month or in excess of 15 degrees Fahrenheit over the course of one year;
- 4. The pH, conductivity, or temperature of the raw water source varies by more than 20 percent of the annual average during any one month; or
- 5. Fecal coliform bacteria occur in the raw water source.

(d) Except as provided at (c) above, only the presence of rotifers, diatoms, coccidia, insect parts and larvae, fecal coliform or *E. coli* bacteria, Cryptosporidium, and/or Giardia cysts in the raw water source will be considered by the Department as indicative of direct surface water influence.

(e) Each well in a wellfield shall be individually monitored pursuant to this section, even if all the wells discharge into a common header, unless physical circumstances prevent such individual monitoring.

(f) A sampling report, including the raw water monitoring results in tabular form and a written description of the monitoring results, shall be submitted to the Department within 30 calendar days after the completion of monitoring conducted pursuant to this section. The report shall be sent to:

Bureau of Safe Drinking Water  
New Jersey Department of Environmental Protection  
PO Box 426  
Trenton, New Jersey 08625-0426

Amended by R.2000 d.354, effective August 21, 2000.  
See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

#### 7:10-9.5 Surface water treatment plant reporting requirements

(a) Each supplier of water that uses a surface water source shall submit the following documentation to the Department:

- 1. For treatment plants with a capacity of less than 10 MGD, the "Bureau of Safe Drinking Water Surface Water Treatment Plant Survey," which includes a process schematic drawing of the treatment plant, and detailed information on contact basins, filters and disinfectant, shall be submitted to the address noted in N.J.A.C. 7:10-9.4(f) by March 30, 1997. For treatment plants with a capacity of less than 10 MGD that do not meet the filtration and disinfection treatment requirements established under the National Regulations, 40 CFR 141.73, as determined by the Department based on information submitted in the Survey, the supplier of water may have the plant evaluated pursuant to (a)2 below in order to demonstrate compliance with this subchapter.

(b) To apply for approval as a certifying agency to conduct training courses and examinations for the purpose of certifying individuals as certified testers pursuant to the requirements of this subchapter, the applicant-certifying agency shall submit to the Department for approval a certification program that describes the training course and materials for certified testers, and identifies and describes the qualifications of the course instructors and examiners.

(c) The Department shall review the application for approval as a certifying agency submitted pursuant to (a) above and approve or deny the application based on the following factors:

1. The certifying agency shall conduct courses consisting of a minimum of 26 hours of lecture on the theory of backflow prevention and six hours of practice in the testing of backflow prevention devices;

2. The certifying agency shall administer a written exam on the theory of backflow prevention and a practical exam on the testing and inspection of double check valve assemblies and reduced pressure zone backflow preventer assemblies made by different manufacturers whose backflow prevention devices are in common use;

3. The certifying agency shall employ course instructors who have at least five years experience in the public water system industry with direct knowledge of backflow prevention theory and practice; and

4. The certifying agency shall issue certified tester certificates only to those individuals who successfully complete the course and receive a passing grade of 70 percent or higher for the written theory examination and of 80 percent or higher for the practical examination.

(d) Each approved certifying agency shall retain a record of course attendees and the grades received by each attendee on the certification examination for a minimum period of five years.

(e) Each approved certifying agency shall establish minimum standards for the periodic (at least every three years) re-certification of certified testers.

(f) An approved certifying agency shall submit to the Department a list of certified testers as follows:

1. The list shall be in printed and digitized forms in approved formats; and

2. The list may be submitted as often as the approved certifying agency deems necessary to reflect an accurate listing of all certified testers, but not less than once per calendar year, in order for the certifying agency to retain its approved status.

(g) The Department shall revoke its approval of a certifying agency if it determines that the certifying agency is not in compliance with any of the requirements of this section.

1. The Department shall notify a certifying agency in writing of its determination that the certifying agency is not in compliance with the requirements of this section.

2. The Department shall revoke approval of the certifying agency if such certifying agency does not achieve compliance within 90 days of its receipt of the notice of noncompliance pursuant to (g)1 above.

3. The Department shall notify all holders of existing physical connection permits within 30 days of the date of revocation of an approval of a certifying agency pursuant to (g)2 above.

(h) This section shall become operative May 17, 1997.

#### 7:10-10.9 Cross-connection control by containment

(a) In conjunction with the requirements of the preceding sections of this subchapter and the requirements of the Plumbing Subcode of the New Jersey State Uniform Construction Code, N.J.A.C. 5:23-3.15, for the prevention of illegal plumbing cross-connections, and with any other State or local requirements for the practice or procedure known as "cross-connection control by containment," the owner of a public community water system may require any of its customers to install backflow prevention devices on the public community water system service line(s) when:

1. The customer is a facility with cross-connection hazards as defined at N.J.A.C. 7:10-1.3 and listed in Appendix A of this subchapter, if the supplier of the water determines that the facility presents a threat to the public community water system's water quality; or

2. The customer is not a facility with cross-connection hazards but such facility contains a substance, uses a process, or utilizes water in a manner which may contaminate a public water system.

(b) Any owner of a public community water system who requires the installation of a backflow prevention device pursuant to (a) above shall have a cross connection control plan in effect which has been developed in accordance with the United States Environmental Protection Agency's "Cross-connection Control Manual," June 1989, EPA 470/9-89 007, as revised and/or supplemented from time to time, and which has been approved by the Department.

Amended by R.2000 d.354, effective August 21, 2000.  
See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).  
In (a)1, changed N.J.A.C. reference.

#### 7:10-10.10 Requests for adjudicatory hearings

An applicant for a permit under N.J.A.C. 7:10-10.5, for a certification under N.J.A.C. 7:10-10.8, or any certifying agency whose approval has been revoked by the Department pursuant to N.J.A.C. 7:10-10.8(g), or any person subject to the limitation on third party appeal rights set forth in P.L. 1993, c. 359 (N.J.S.A. 52:4B-3.1 through 3.3), who believes himself or herself to be aggrieved with respect to decisions

made by the Department pursuant to this subchapter may contest the decision and request an adjudicatory hearing pursuant to Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. and the New Jersey Uniform Administrative Procedure Rules, N.J.A.C. 1:1, in accordance with the appeal procedures set forth at N.J.A.C. 7:10-11.17.

## APPENDIX A

### FACILITIES WITH CROSS-CONNECTION HAZARDS

The following is a list of the types of facilities which are considered as possible cross-connection hazards.

#### I. Medical Facilities

1. Hospitals
2. Clinics
3. Laboratories
4. Veterinary hospitals/clinics
5. Nursing and convalescent homes
6. Physical therapy clinics
7. Morgues
8. Mortuaries
9. Autopsy facilities
10. Embalmers
11. Medical offices with radiographic, physical therapy, and/or laboratory facilities.

#### II. Treatment plants

1. Sewage treatment plants
2. Waste water treatment plants
3. Industrial waste treatment plants
4. Pumping stations (sewage, waste water, industrial waste)

#### III. Commercial manufacturing/storage

1. Automotive plants
2. Aircraft/Missile plants
3. Beverage bottling plants
4. Breweries/distilleries

5. Chemical plants (manufacturing, use, storage, treatment, disposal)
6. Car wash facilities (automatic or self-serve)
7. Dairies and cold storage plants
8. Metals manufacturing plant (Cleaning, processing, refining, fabricating)
9. Paper and paper product plants
10. Petroleum or gas processing or storage facilities
11. Photographic film processing plants
12. Plating plants
13. Power plants
14. Radioactive materials or substances plants or handling facilities
15. Rubber plants (natural or synthetic rubber production)
16. Sand, gravel, concrete or asphalt plants
17. Technical schools, colleges, and universities
18. Solar heating systems (direct or auxiliary)
19. Temporary services (street cleaners, tank trucks) using hydrants
20. Waterfront facilities (docks, marinas, etc.)
21. Food processing (manufacturing, canning, packaging)

#### IV. Buildings

1. Building with sewage ejectors
2. Building with water booster pump and/or water storage tank
3. Supermarkets
4. Restaurants
5. Schools, research facilities, and any buildings with laboratories
6. Buildings with fire service
7. Warehouses used for storage of hazardous materials
8. Factories
9. Shopping malls

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In I, deleted former 11 and recodified former 12 as 11.

1. Pretreatment by sedimentation is required for all surface waters, unless pilot test data submitted pursuant to N.J.A.C. 7:10-11.8(d)1 demonstrate that sedimentation pretreatment is not necessary.

2. The minimum depth of the sedimentation basin shall be 10 feet, with ample allowance for sludge accumulation or sludge removal equipment and a depth of water flow of at least six feet.

3. Inlet and outlet facilities shall be designed so as to minimize short-circuiting. Submerged inlet ports shall be located so as to avoid creating a disturbance of the settled floc.

4. The maximum surface loading rates (gallons per minute per square foot) are as follows:

	Flocculation or Iron or Manganese <u>Removal</u>	Lime <u>Softening</u>
Ground Water	0.5	1.0
Surface Water	0.375	0.75

5. For around-end baffling in a horizontal plane, the maximum surface loading rate pursuant to (d)4 above shall be reduced by 50 percent.

6. For horizontal units, the minimum detention time shall be four hours for surface water and two hours for lime softening treatment plants.

7. The water velocity through settling basins shall not exceed 0.5 feet per second.

8. The Department may approve the use of tube or plate settlers if justification is provided for reduced detention times. In such cases, a pilot plant study shall be implemented to demonstrate satisfactory operation.

i. Sufficient freeboard shall be provided above the top of the settlers to prevent freezing of the units in outdoor installations. The construction of outdoor units is discouraged.

ii. The maximum surface loading rate shall not exceed two gallons per minute per square foot of horizontal tube settler area.

9. Outlet weir loadings shall not exceed 20 gallons per minute per foot of length of settled water. When orifices are used rather than weirs, their size, number and arrangement shall be such as to produce loadings equivalent to the requirements for weirs. Weirs or orifices shall be arranged to produce uniform flow rates over the area of the sedimentation tank.

(e) Regulations for solids-contact units are as follows:

1. Solids-contact units for flocculation, lime softening, iron or manganese removal, and for settling.

2. Solids-contact units shall be installed and initially operated under the supervision of the manufacturer's representative.

3. Each solids-contact unit shall facilitate satisfactory flocculation of the water before it enters the settling area.

4. Surface loading rates for solids-contact units shall be calculated on the basis of the input flow and the horizontal area of flow in the clarification zone at a level five feet below the level of the discharge weirs or orifices. The maximum surface loading rates (gallons per minute per square foot) are as follows:

	Flocculation or Iron or Manganese <u>Removal</u>	Lime <u>Softening</u>
Ground Water	1.0	2.0
Surface Water	0.75	1.5

5. Each solids-contact unit shall be equipped with sampling taps to facilitate collection of water samples from various locations within the unit to ensure its efficiency.

6. Outlet weir loadings shall not exceed 20 gallons per minute per foot of length of softened water, or 10 gallons per minute per foot of length of flocculated water. Where orifices are used rather than weirs, their size, number and arrangement shall be such as to produce loadings equivalent to the requirements for weirs. Weirs or orifices shall be arranged to produce uniform vertical flow rates over the area of the solids-contact unit.

7. Each solids-contact unit shall be equipped for effective concentration of sludge and to facilitate sludge draw-off and disposal.

8. Sludge piping shall be arranged so as to facilitate operation and cleaning. Piping shall not be less than three inches in diameter and shall allow for flushing with clear water.

9. Sludge valves shall be located outside of the solids-contact tank.

10. Each solids-contact unit shall be equipped to allow manual override of any pre-set automatic intermittent withdrawal of sludge.

**7:10-11.14 Filtration**

(a) General requirements for filtration are as follows:

1. Each filter unit shall be provided with equipment which facilitates cleaning, and placing or replacing the filter medium.

2. Each filter unit shall be provided with equipment for backwash (except for slow sand filtration).

3. Surface water treatment facilities shall be equipped with a continuous or sequencing turbidity monitoring device for each filter unit and a continuous turbidity monitoring device for the plant effluent. The sequencing

devices shall automatically analyze and record each filter unit effluent turbidity at least once every 15 minutes.

(b) Total filtration capacity shall be such that, with one unit out of service, the maximum filtration rate of any of the remaining units will not exceed the requirements established at N.J.A.C. 7:10- 11.14(c)2.

(c) Filter unit design requirements are as follows:

1. Filter units shall not contain any contamination hazards, single walls between treated and untreated water, or plumbing cross connections.

2. Pressure filtration rates shall not exceed a loading rate of three gallons per minute per square foot unless approved by the Department.

3. Pressure filter units shall not be used for surface water treatment.

4. The filtration rate for rapid sand and mixed media shall not exceed five gallons per minute per square foot.

5. Size requirements for filter media are as follows:

i. For rounded particles, maximum effective size shall be 0.55 mm.

ii. For angular particles, maximum effective size shall be 0.45 mm.

iii. The maximum uniformity coefficient shall be 1.6.

iv. The minimum thickness of filter media shall be 24 inches.

v. The maximum head loss through filter medium shall be eight feet of water.

6. Regulating valves shall be provided for the control of filtration rates.

7. When dual media filters with sand and anthracite beds are used, the anthracite particles may be twice the effective size required under (c)5 above. The sand bed shall be a minimum of 12 inches thick.

8. At least 12 inches of graded gravel shall be placed over the underdrains or another filter media support method specifically designed by the filter media manufacturer shall be used.

9. Slow sand filter units may be used if approved by the Department. The Department shall approve the use of slow sand filters if the applicant demonstrates the adequacy of such water treatment technology through pilot plant tests on the source of water to be treated.

(d) Granular activated carbon (GAC) may be used as a filter medium provided the filter unit meets the filter design requirements of (c) above, and adequately controls bacterial growth in the filtered water, incorporates backwash equipment, and facilitates replacement of medium when necessary.

(e) Regulations for backwash water are as follows:

1. Backwash water shall be filtered water.

2. The available wash rate shall be a minimum of 15 gallons per minute per square foot and shall provide for a minimum of 30 percent expansion of the filter medium. Supplemental washing facilities such as surface wash or air scour units shall be provided.

3. Reduced pressure zone backflow preventers shall be installed to prevent back siphonage of filter surface wash water.

4. Backwash water shall not be discharged to a sanitary sewer system except in accordance with the New Jersey Pollutant Discharge Elimination System rules, N.J.A.C. 7:10-14A, and with written approval from the appropriate sewerage authority. Direct connections between backwash water lines and sanitary or storm sewer lines are prohibited. Discharges shall be made through an above-ground air gap.

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

Amended internal reference.

Amended by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

In (a)3, substituted "15 minutes" for "hour".

#### 7:10-11.15 Miscellaneous treatment processes

(a) Regulations for aeration are as follows:

1. The supplier of water shall evaluate each aeration treatment unit for its effectiveness in water treatment and adequate protection of the water.

2. Because of the large variation in aeration treatment unit's effective air to water ratios, the Department does not set minimum standards for the air to water ratio. The Department shall review and approve the design of each such treatment unit during its review of a permit application under this subchapter.

3. Any aeration process not subject to filtration for particulate removal must meet the following minimum requirements for protection against dust, insects, and bacteriological contamination:

i. All air entering an induced or forced air aeration unit shall be passed through a corrosion-resistant screen of not less than 24 mesh.

ii. All aerators, except those followed by flocculation, sedimentation and filtration units, shall be constructed so as to prevent contamination by birds, insects, wind-

borne debris, rainfall and water draining off the exterior of the aerator.

9. Pre- and post-column water sampling taps are required. Means to facilitate measurement of influent and effluent air quality and intake air quantity shall be provided.

10. The packed column shall be designed to facilitate the periodic adding of chlorine for pre-disinfection or of another oxidant or acid for cleaning the medium.

11. The air intake shall be located so as to avoid recirculation of the gas phase discharge from the top of the facility.

12. Protective screens of a minimum 24 mesh and air particulate filters are required on the air intakes.

13. A moisture barrier (demister) shall be provided.

14. Backup blowers are required where multiple water sources are being treated.

(h) Regulations for granular activated carbon (GAC) for adsorption of organic compounds are as follows:

1. The requirements for filtration at N.J.A.C. 7:10-11.14 shall be met, as applicable.

2. The empty bed contact time shall not be less than 20 minutes.

3. The GAC treatments units shall be capable of being backwashed, even if the GAC is not used as a filtration medium. The minimum available backwash rate shall be 12 gallons per minute per square foot of medium surface area.

4. If GAC is used as a dual function medium (filter and adsorber), the estimated time of breakthrough shall be redetermined to account for the chromatographic effect of frequent backwashing.

5. For GAC contained in pressure vessels, means for releasing excess pressure shall be provided to prevent over pressurization.

6. The influent and effluent lines to the GAC treatment unit shall be equipped with samplings taps. In addition, at least two taps shall be spaced in a vertical line within the GAC bed for monitoring the progress of the mass transfer zone within the GAC treatment unit.

7. Since GAC is easily abraded, transport systems shall be designed to minimize GAC breakup.

8. Virgin GAC shall be used, except that regenerated GAC may be used if such GAC was used previously only in potable water treatment plants and regenerated in facilities used only for potable water treatment plant filter media.

9. The GAC bed shall be a minimum of 48 inches deep.

10. GAC shall not be used as a dual functioning medium (filter and adsorber) when synthetic organic chemicals

are regularly present in the raw water and filtration of the water is required.

11. GAC treatment units must be pilot or bench tested to determine GAC life.

12. Each GAC treatment unit shall be provided with isolation valves and a drain.

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In (f)4ii, substituted "Gravimetric" for "Volumetric" in the second sentence.

#### 7:10-11.16 Disinfection of public community water system water supplies

(a) General regulations for disinfection are as follows:

1. Disinfection of public community water supplies shall be accomplished with chlorine or chlorine compounds. The Department shall approve use of other disinfecting agents if post-chlorination is used to provide an adequate chlorine residual in the finished water.

2. Chlorination shall be the last treatment process in a treatment plant with multiple treatment processes. Pre-chlorination may be practiced if it is applied in conjunction with post-chlorination.

(b) Disinfection equipment requirements are as follows:

1. Gas chlorinators shall be of the solution feed type and hypochlorite feeders shall be of the positive displacement type.

2. If chlorine dioxide is used as the disinfectant, sodium chlorite shall be injected into the discharge line of a solution feed chlorinator, with subsequent formation of the chlorine dioxide in the reaction chamber.

3. If ammonia is added in conjunction with chlorine for chloramine disinfection, the ammonia treatment unit shall be separate from the chlorine treatment unit so that the ammonia and chlorine gases do not mix.

4. Superchlorination followed by dechlorination may be used, provided the minimum chlorine contact periods set forth at (e) below are employed.

(c) Post-chlorination treatment units shall have the capacity to produce free chlorine residuals in accordance with (e) below, even if the maximum water flow rates coincide with the anticipated maximum chlorine demand.

(d) The chlorination treatment system shall have sufficient capacity to disinfect all water within the treatment plant if one treatment unit is out of service.

(e) Regulations for chlorine contact period and chlorine residual are as follows:

1. To afford adequate protection for both surface water and ground water, chlorination treatment systems shall be designed to ensure the following minimum chlorine con-

tact periods before the water enters the public community water system distribution system. The engineer's report submitted with the application for a permit under this subchapter shall demonstrate that these requirements are met.

i. Ground water shall be treated for a minimum chlorine contact period of at least five minutes to produce the minimum free chlorine residual level required pursuant to (e)3 below or at least 30 minutes to produce the minimum combined chlorine residual level required pursuant to (e)3 below.

ii. Surface water or ground water under the direct influence of surface water shall be treated for a minimum chlorine contact period of 30 minutes to produce the minimum free chlorine residual level required pursuant to (e)3 below.

2. A post-chlorination treatment with a minimum of five minutes chlorine contact time shall be employed by all public community water systems.

3. Chlorination treatment units shall be designed to produce the following chlorine residuals at the specified pH values.

**Required Chlorine Residuals at Specified pH Values**

pH Value	Available Chlorine Residual	
	Free	Combined
Up to 7.0	0.2 ppm	1.0 ppm
7.0 to 8.0	0.3 ppm	1.5 ppm
8.0 to 9.0	0.4 ppm	2.0 ppm

(f) Regulations for gas chlorinators are as follows:

1. Gas chlorinating devices shall be located in above-grade separate rooms with an outside entrance only and shall have proper ventilation including an exhaust fan near floor level with an outside switch. The doors of such rooms shall open outward and shall be provided with panic type hardware (that is, a push bar for opening the door) on the inside of the door. A room heater shall be provided. Chlorine scale and storage rooms shall be equipped in the same manner.

2. An automatic chlorine leak alarm, or observation window to facilitate visual inspection without opening the door of the chlorination room, shall be provided.

3. Gas chlorinating devices shall be equipped with a minimum of two chlorine cylinders interconnected by a manifold and valved to permit rapid changeover when the in-use cylinder becomes exhausted. An automatic switch over valve shall be used in water treatment plants at which an operator is not present 24 hours per day.

4. Scales shall be provided for determining the changes in weight of chlorine cylinders.

5. A sufficient supply of water shall be available for operating the chlorinator and shall be adequately protected against back-siphonage.

6. The rotameter used in a gas chlorinator shall be appropriately sized to prevent an abnormally high chlorine application rate in the event that the rotameter is accidentally misadjusted to apply chlorine at a rate higher than intended.

7. Automatic chlorinators with chlorine residual recorders and alarm systems to indicate chlorinator failure shall be installed at all surface water treatment plants and at other types of water treatment plants if the source water does not meet the microbiological standards specified in the State primary drinking water regulations, N.J.A.C. 7:10-5.

8. A gas mask, preferably with air pack or air hose to the exterior, shall be stored in a readily accessible location outside the chlorine room or other appropriate location and maintained in good operating condition in accordance with the manufacturer's specifications.

(g) Regulations for hypochlorinators are as follows:

1. The room in which a hypochlorinator is housed shall be heated.

2. Hypochlorinators shall meet the requirements of N.J.A.C. 7:10-11.12.

3. A solution tank with minimum storage capacity of 36 hours shall be used, and shall be of durable material resistant to fracture and inert to reaction with the hypochlorite solution.

(h) Regulations for auxiliary equipment are as follows:

1. A comparator, suitable for determining chlorine residuals by the D.P.D. method in accordance with Part 4500CL-G of Standard Methods for the Examination of Water and Wastewater, 17th Edition, as amended and supplemented, incorporated herein by reference, shall be used. Supplies of the necessary reagents shall be adequate and available. A copy of the Standard Methods is available from the American Public Health Association, 1015 Fifteenth Street NW, Washington, D.C. 20005.

2. Where gas chlorination is used, an ammonia solution shall be available for testing for chlorine leaks.

(i) Regulations for ozonators are as follows:

1. Ozonation may be used for primary disinfection but not as a substitute for post-chlorination.

2. Equipment used for ozonation shall be durable and corrosion resistant.

(j) Regulations for chlorine dioxide generators are as follows:

1. The chlorine dioxide maximum feed rate shall be 1.5 mg/l.

2. Each chlorine dioxide generator shall be at least 95 percent efficient in producing chlorine dioxide and the production of by-products (for example, chlorates, chlorites) shall not exceed five percent.

3. A comparator, suitable for determining chlorine dioxide residuals by the D.P.D. method in accordance with Part 4500-C1O2D of the Standard Methods for the Examination of Water and Wastewater, 17th Edition, as amended and supplemented, incorporated herein by reference, shall be used. Supplies of the necessary reagents shall be adequate and available. A copy of the standards may be obtained as provided at (h)1 above.

4. A test kit, using amperometric titration or an approved equivalent, shall be used to monitor chlorine dioxide from the generator product stream.

(k) Disinfection equipment, contact tanks and conduits shall be designed to provide for the minimum disinfectant contact periods established under the National Regulations, 40 CFR 141.70.

#### 7:10-11.17 Requests for adjudicatory hearings

(a) An applicant for a permit under this subchapter or any person, subject to the limitation on third party appeal rights set forth in P.L. 1993, c.359 (N.J.S.A. 52:4B-3.1 through 3.3), who believes himself or herself to be aggrieved with respect to any decision made by the Department regarding such permit application submitted pursuant to this subchapter, may contest the decision and request an adjudicatory hearing pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1, if the Department:

1. Denies a permit application, or any part thereof;
2. Revokes, withdraws or modifies a previously issued permit approval; or
3. Issues a permit with conditions that the applicant considers unreasonable.

(b) Requests for an adjudicatory hearing shall be in writing and submitted to:

Office of Legal Affairs  
Attention: Adjudicatory Hearing Requests  
Department of Environmental Protection  
PO Box 402  
Trenton, New Jersey 08625-0402

(c) A request for an adjudicatory hearing must be received by the Department within 20 calendar days after the date upon which the notice of decision on the permit application was received by the applicant.

(d) A request for an adjudicatory hearing shall be submitted in writing to the Department and shall contain:

1. The name, address and telephone number of the person making the request;
2. A statement of the legal authority and jurisdiction under which the request for a hearing is made;
3. A brief and clear statement of specific facts describing the Department decision for which a hearing is requested; and
4. A statement of all facts alleged to be at issue and their relevance to the Department decision for which a hearing is requested. Any legal issues associated with the alleged facts at issue must also be included.

(e) If the Department does not receive the hearing request within 20 days after receipt by the applicant of the notice of decision on the permit application, the Department shall deny the hearing request.

(f) If the applicant or any person requesting a hearing pursuant to (a) above fails to include all the information required by (d) above, the Department may deny the hearing request.

(g) The Department shall determine whether a request for an adjudicatory hearing should be granted. In making such determination, the Department shall evaluate the request to determine whether a contested case exists and whether there are issues of fact which, if assumed to be true, might change the Department's decision. Where only issues of law are raised by the request for a hearing, the request will be denied. Denial by the Department of a request for an adjudicatory hearing shall constitute the final decision of the Department for the purposes of judicial appeal.

(h) The adjudicatory hearing, if granted, shall be held before an administrative law judge and in accordance with the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., and the rules and regulations promulgated thereto.

Amended by R.2000 d.354, effective August 21, 2000.  
See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

## SUBCHAPTER 12. STANDARDS FOR THE CONSTRUCTION OF PUBLIC NONCOMMUNITY WATER SYSTEMS AND NONPUBLIC WATER SYSTEMS

### 7:10-12.1 Authority and scope

This subchapter establishes the certification requirements and standards for the construction of new, altered, or replacement nonpublic water systems and public noncommunity water systems pursuant to the State Act; N.J.S.A.

58:11-23 et seq., the Realty Improvement Sewerage and Facilities Act; and 58:4A-4.1 et seq., commonly known as the Subsurface and Percolating Waters Act.

### 7:10-12.2 Penalties

Violation of any provision of this subchapter may subject the owner of a public noncommunity water system or non-public water system to an enforcement action and penalty in accordance with the State Act and N.J.A.C. 7:10-3.

### 7:10-12.3 Additional definitions

In addition to the words and terms defined at N.J.A.C. 7:10-1.3, the following words and terms are defined for the purposes of this subchapter:

“Adequate protection” means construction methods which ensure that the water that reaches consumers complies continuously with the physical, chemical, and bacteriological requirements of the State Primary Drinking Water Regulations at N.J.A.C. 7:10-5. The term “adequately protected” shall be construed accordingly.

“Alter” means to replace any portion of an existing water system. The terms “alteration” and “altered” shall be construed accordingly.

“Annular space” means the space between the well casing and/or well screen and the wall of the borehole or, in the case of a multiple cased well, all of the spaces between casings and all of the space between the outer casing and the wall of the borehole.

“Approval” means written authorization from the Department or the administrative authority to an applicant for the construction of a proposed new, altered, or replacement water system pursuant to the requirements of this subchapter.

“Artesian well” means a well in which water is derived from below a confining layer and in which the static water level rises above the aquifer.

“Aquifer” means any subsurface water-saturated zone which is significantly permeable so that it may yield sufficient quantities of water from wells or springs in order to serve as a practical source of potable water supply.

“Building sewer line” means the pipe extending from the outer wall of a building to a septic tank or approved place of disposal including a public sewer, and the lines to all parts of the subsurface sewage disposal system, except those classified as distribution lines.

“Certification” means the written statement issued by the administrative authority or the Department pursuant to N.J.A.C. 7:10-12.39 through 12.42 that a new, altered, or replacement water system complies with the requirements of the Realty Improvement Sewerage and Facilities Act (N.J.S.A. 58:11-23 et seq.), the State Act and this subchapter.

“Cesspool” means a covered pit with open-jointed lining into which untreated sewage is discharged, the liquid portion of which is disposed of by leaching into the surrounding soil, the solids or sludge being retained within the pit.

“Cistern” means a tank for the collection of rain water draining from a roof or roofs, which water is intended to be used for potable purposes.

“Confining layer” means a geologic formation which separates aquifers and which consists of material, such as clay or unfractured rock, that does not permit perceptible vertical transmission of water to other aquifers.

“Consolidated formation” means a geologic formation in which the sands, gravels, clays or other similar materials have been lithified. Such a formation will commonly remain stable around an open borehole without caving.

“Construct” means to build, assemble or install a new or replacement water system or to enlarge or alter an existing water system. The term “construction” shall be construed accordingly.

“Contamination” means sewage, industrial wastes, organisms of the coliform group, water-borne pathogens, or harmful or objectionable material in potable water. The term “contaminated” shall be construed accordingly.

“Decommissioning” means the permanent closure or sealing of a well in accordance with the procedures set forth in N.J.A.C. 7:9.

“Disposal bed” means an individual subsurface sewage disposal system component consisting of a closed excavation made within soil or fill material to contain filter material in which two or more distribution laterals have been placed for the disposal of septic tank effluent.

“Disposal field” means a disposal bed or a group of one or more disposal trenches. The perimeter of the disposal field corresponds to the perimeter of the disposal bed, or a line circumscribing the outermost edges of the outermost disposal trenches and including the area between the disposal trenches.

“Disposal trench” means an individual subsurface sewage disposal system component of a covered excavation made within soil or fill material to contain filter material in which a single distribution lateral has been placed for the disposal of septic tank effluent.

“Distribution box” means a watertight structure which receives sanitary sewage effluent from a septic tank and distributes such sewage effluent in equal portions to two or more pipelines leading to the disposal field.

**7:10-12.10 Priming systems**

All water used to prime pumps for a public noncommunity or nonpublic water system shall be potable water, to prevent the contamination of the water system.

**7:10-12.11 Disinfection of water system components**

(a) After completion of construction, alteration or repair of a public noncommunity or nonpublic water system, all surfaces with which adequately protected water may come into contact shall be disinfected before being placed into service.

(b) Methods of disinfection include, but are not limited to, the following:

1. Contact with a chlorine solution of concentration not less than 50 parts per million for a minimum period of 12 hours;
2. Contact with a chlorine solution of concentration not less than 20 ppm for a minimum period of 24 hours;
3. Thorough wetting of the surfaces to be disinfected by means of brush or spray application of a chlorine solution of concentration not less than 500 ppm for a minimum contact period of one hour.

(c) The method or methods for the disinfection of water system components shall be included in the materials submitted with the application for certification of a new, repaired or altered public noncommunity or nonpublic water system pursuant to N.J.A.C. 7:10-12.39 to 12.42.

**7:10-12.12 Minimum distance requirements**

(a) The minimum distances at which certain components of a public noncommunity or nonpublic water system shall be located away from sanitary sewer and septic systems, fuel storage tanks and other structures are set forth in N.J.A.C. 7:9D-2.

1. An administrative authority may require a greater distance than that required in N.J.A.C. 7:9D-2 between a well and a sewage system component where gravel, limestone, or fractured, creviced or fissured rock formations are expected to be encountered during drilling.
2. An administrative authority shall approve a reduction in the distance required between a well and a disposal field or a seepage pit to a minimum of 50 feet if the well is provided with a casing to a depth of 50 feet or more and such casing extends to, and is sealed into, a confining layer separating the aquifer into which the well is drilled from the stratum of soil in which the disposal field is located.
3. The administrative authority shall approve a reduction in the distance from a well to a building sewer to a minimum of 15 feet if it can be demonstrated that the building sewer is watertight and there are no other practicable alternatives.

Amended by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).  
Rewrote (a); deleted (b) through (e).

**7:10-12.13 (Reserved)**

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).  
Section was "Well room".

**7:10-12.14 (Reserved)**

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).  
Section was "Specific requirements for wells constructed in unconsolidated formations".

**7:10-12.15 (Reserved)**

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In (a)1, rewrote Table 3.

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Specific requirements for wells constructed in consolidated formations".

**7:10-12.16 (Reserved)**

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "General construction requirements for wells".

**7:10-12.17 (Reserved)**

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Well casings".

**7:10-12.18 (Reserved)**

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Well screens and gravel packing".

**7:10-12.19 (Reserved)**

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

Rewrote (g).

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Requirements for sealing the annular space of wells".

**7:10-12.20 (Reserved)**

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Well head requirements".

**7:10-12.21 (Reserved)**

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Pitless well installation".

#### 7:10-12.22 Test for yield and submission of well report

The well driller shall test each completed well for yield and shall complete and submit a well report, on a well record form provided by the Department with the issued well permit, to the Bureau of Water Allocation in the Department at PO Box 426, Trenton, New Jersey 08625-0426, in accordance with N.J.S.A. 58:4A-14 et seq. and N.J.A.C. 7:9D. The well record form includes the following information: well permit number, well owner, name and address, well location address, well use, date constructed, well construction details (that is, depth, bore-hole diameter, casing(s), grouting, screen(s), and gravel pack), pumping test records, permanent pumping equipment, geologic log, and certification by the well driller.

Amended by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Inserted "and N.J.A.C. 7:9D".

#### 7:10-12.23 Springs

(a) An administrative authority shall approve the use of a spring only when construction of a well is not practicable, and provided the water derived from the spring is disinfected in accordance with N.J.A.C. 7:10-12.32.

(b) Any spring approved by the administrative authority as a water source pursuant to this section shall meet the following requirements:

1. Each spring shall be provided with an encasement of concrete or other durable material to prevent contamination of the spring. Such encasement shall be installed so as not to restrict the flow of water into the encasement;
2. The walls of the encasement shall be extended above the elevation of the surrounding ground to prevent the entry of surface water, and the roof shall have a watertight access cover so that the interior of the encasement may be inspected, cleaned, and/or repaired as necessary;
3. The encasement shall be provided with an overflow constructed so as to prevent erosion of the fill surrounding the structure. The overflow shall be constructed so as to prevent the entry of rodents and insects, and shall be downfacing so as to prevent the entry of rain water; and
4. The joint between the encasement wall and any pipe passing through the wall shall be constructed and installed so as to prevent the entry of surface water.

#### 7:10-12.24 Cisterns and dug wells

Cisterns and dug wells shall not be used as sources of water for public noncommunity or nonpublic water systems constructed after November 18, 1996.

#### 7:10-12.25 Surface water sources

(a) Surface water shall not be used as a water source for a nonpublic water system.

(b) The Department shall approve the use of surface water for a public noncommunity water system only if use of a well water supply is impracticable and if the surface water is treated pursuant to N.J.A.C. 7:10-12.33

(c) Public noncommunity water systems using surface water sources shall be constructed in accordance with N.J.A.C. 7:10-11.8 and shall meet the water treatment requirements of N.J.A.C. 7:10-12.33.

#### 7:10-12.26 (Reserved)

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Design requirements for well pumping equipment".

#### 7:10-12.27 (Reserved)

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Well pump down control".

#### 7:10-12.28 (Reserved)

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Location requirements for pumping equipment".

#### 7:10-12.29 (Reserved)

Repealed by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

Section was "Pump controls".

#### 7:10-12.30 Water quality analysis and treatment

(a) Upon completion of construction of a water system, the owner of a public noncommunity or nonpublic water system shall sample and analyze the microbiological quality of the raw water from the system and submit a copy of the results of the analysis to the administrative authority.

1. If the water does not meet the microbiological requirements of the State primary drinking water regulations at N.J.A.C. 7:10-5, the owner shall disinfect the water in accordance with N.J.A.C. 7:10-12.32.

2. Regardless of the raw water microbiological quality, the owner of a nonpublic water system or public noncommunity water system that uses a spring or surface water source shall disinfect the water in accordance with N.J.A.C. 7:10-12.32.

3. Microbiological quality shall be determined by analysis for total coliform. If the sample is total coliform positive, the total coliform positive culture medium must be analyzed to determine if fecal coliforms are present, except that *E. coli* may be tested for in lieu of fecal coliform. Analysis shall be conducted in accordance with N.J.A.C. 7:18.

(b) The owner of a public noncommunity water system shall sample and analyze the raw water from the system for inorganics, volatile organic compounds (VOCs), and radionuclides in accordance with N.J.A.C. 7:10-5 and for secondary contaminants in accordance with N.J.A.C. 7:10-7. If the system uses a surface water source, the administrative authority shall require the system owner to sample and analyze the water for disinfection by-products and pesticides regulated pursuant to N.J.A.C. 7:10-5.

(c) The owner of a nonpublic water system shall sample and analyze the raw water from the system for the parameters listed at (c)1 through 9 below. The administrative authority may require sampling and analysis for inorganic chemicals, volatile organic compounds and/or radionuclides as appropriate based on the region and the aquifer in which the water source is located.

1. Nitrates;
2. Iron;
3. Manganese;
4. pH;
5. Lead;
6. All volatile organic compounds with MCLs;
7. In addition to the parameters listed at (c)1 through 6 above, if the water system is located in Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Monmouth, Ocean, or Salem County, mercury;
8. In addition to the parameters listed at (c)1 through 6 above, if the water system is located in Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Morris, Passaic, Somerset, or Union County, arsenic; and
9. In addition to the parameters listed at (c)1 through 6 above, if the water system is located in Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Hunterdon, Mercer, Middlesex, Monmouth, Ocean or Salem County, gross alpha particle activity, determined using the 48 Hour Rapid Gross Alpha Test, in accordance with N.J.A.C. 7:18.

(d) The owner of the water system shall submit a copy of the results of the analyses conducted pursuant to (b) and (c) above to the administrative authority.

(e) Based on the results of the analyses submitted pursuant to (d) above, the administrative authority may require

physical and chemical treatment of the water in accordance with N.J.A.C. 7:10-12.33.

(f) The owner of public noncommunity or nonpublic water system that uses a surface water source shall filter the water before it enters the distribution system using a filtration method approved by the Department. Public noncommunity water systems shall in addition meet the requirements of N.J.A.C. 7:10-9.

(g) All analyses required pursuant to this section shall be conducted at a certified laboratory, certified in accordance with N.J.A.C. 7:18 for the specific analytical method used.

(h) The administrative authority shall require the owner of a public noncommunity water system or nonpublic water system to provide treatment of the water when the water supply does not meet any of the maximum contaminant levels specified at N.J.A.C. 7:10-5.

(i) The administrative authority shall require the owner of a public noncommunity water system or nonpublic water system to provide treatment of the water when it determines that the exceedance of one or more of the standards established in the State Secondary Drinking Water Regulations, N.J.A.C. 7:10-7, causes adverse effects on consumers of that system's water.

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In (c), inserted references to inorganic chemicals and radionuclides and deleted reference to radon.

Amended by R.2004 d.442, effective December 6, 2004.

See: 36 N.J.R. 295(a), 36 N.J.R. 5383(b).

In (a), added 3; rewrote (c).

### 7:10-12.31 Chemical handling and chemical feed systems

(a) General requirements for chemical handling and chemical feed systems are as follows:

1. Suitable means shall be provided to ensure proper and continuous application rate of chemical.
2. Variation of the feed rate shall not exceed five percent of the intended application rate.
3. Chemical solution feeders shall be located so as to prevent dust and fumes from entering other operating areas in the treatment plant.
4. Chemical solution shall not be introduced directly into any pipe or conduit under negative pressure or directly into a well.
5. An antisiphon device shall be installed on the chemical solution feed line. The device shall include an antisiphon valve to provide a vacuum break on the chemical solution feed line. The chemical feed line shall be looped to a level higher than the highest elevation of the chemical storage tank so as to prevent backsiphonage or drainage of the chemical solution into the treated water supply.

6. Each chemical solution feeder shall be equipped with a no-flow switch to prevent the feeding of chemical solution upon cessation of water flow.

(b) Regulations for chemical solution tanks are as follows:

1. When dissolving a solid treatment chemical, each chemical solution tank shall be provided with adequate agitation to keep the strength of the solution uniform.

2. Makeup water shall be introduced into the chemical solution tank through an air break or other approved method, to prevent back-siphonage.

3. Each chemical solution tank shall be equipped with a cover to prevent contamination and shall be of capacity sufficient to provide at least 24 hours worth of storage at normal operating feed rates.

(c) Chemical feed lines shall be equipped with clean-out connections, shall be easily accessible for repair or cleaning, shall be protected against damage and freezing, shall be corrosion resistant, shall be as short as possible, and shall be provided with adequate slope to permit draining.

(d) Where applicable, as determined by the administrative authority, safety equipment such as a shower, a U.S. Bureau of Mines approved respirator, rubber or neoprene gloves and apron, and goggles shall be provided.

#### 7:10-12.32 Disinfection of public noncommunity and nonpublic water systems

(a) General regulations for disinfection are as follows:

1. Disinfection shall be accomplished using chlorination, ultra-violet light, or ozonation, in accordance with the methods described in (b), (c) or (d) below.

2. The owner of any public noncommunity water system with an extensive service area shall maintain a detectable disinfectant residual in the water distribution system. For purposes of this subsection, an extensive service area is 100 service connections or 1500 linear feet of water mains or gravity storage.

3. Chlorine disinfection shall be accomplished in accordance with the chlorine contact period and residual requirements set forth in N.J.A.C. 7:10-11.16 (e).

(b) Regulations for chlorination are as follows:

1. The administrative authority shall approve the use of gas chlorination for public noncommunity and nonpublic water systems only if the use of hypochlorite feed systems are impractical for the specific application.

2. The chlorinating device shall be capable of producing a chlorine residual after the contact period as required pursuant to N.J.A.C. 7:10-11.16(e)3. A chlorine residual test kit shall be used to verify that the correct application rate is maintained.

3. The chlorination device shall be protected from freezing.

4. Gas chlorinating devices shall be located in above-grade separate rooms with an outside entrance only and shall have proper ventilation including an exhaust fan near floor level with an outside switch. An observation window to permit visual inspection without opening the door of the chlorine room shall be provided. The doors of such rooms shall open outward and shall be provided with panic type hardware (that is, a push bar for opening the door) on the inside of the door. A room heater shall be provided. Chlorine scale and storage rooms shall be equipped in the same manner.

5. Operation of the chlorinating devices shall be synchronized with the operation of the well pump.

(c) Regulations for disinfection by ultra-violet light are as follows:

1. Ultra-violet tubes shall be jacketed so that a temperature of 105 degrees Fahrenheit is maintained.

2. The jacket on the ultra-violet light tubes shall be quartz or high-silica glass with similar optical characteristics.

3. The ultra-violet light disinfection unit shall be designed to permit frequent mechanical cleaning of the water contact surface of the ultra-violet light tube jacket without disassembly of the unit.

4. The maximum water depth in the disinfection chamber, measured from the ultra-violet light tube surface to the outer walls of the chamber, shall not exceed three inches.

5. Ultra-violet radiation at a level of 2,537 Angstrom shall be applied at all points throughout the disinfection chamber at a minimum rate of 16,000 microwatt seconds per square centimeter.

6. An automatic flow control valve, accurate within the expected pressure range, shall be installed to restrict flow to the maximum design flow of the ultra-violet disinfection unit.

7. An accurately calibrated ultra-violet light intensity meter, filtered to confine its sensitivity to the range of disinfection spectrum, shall be installed in the wall of the disinfection chamber at the point of greatest water depth from the light transmitting source.

8. A flow diversion valve or automatic shut-off valve controlled by the ultra-violet light intensity meter shall be installed so as to permit water flow into the water system only when the minimum radiation level specified at (c)5 is applied. When power is not being supplied to the unit, the valve shall be in a closed (fail-safe) position to prevent the flow of water into the water system.

9. The ultra-violet light disinfection unit shall be installed in a manner such that it cannot be bypassed.

1. The application form for certification shall, at a minimum, contain the following information:

- i. The name of water system owner;
- ii. The address of water system owner;
- iii. The location of water system;
- iv. A description of the work to be performed; and
- v. Relevant specifications and diagrams for the work to be performed, sufficient to enable the administrative authority to determine conformance with the requirements of this subchapter.

(b) In the case of a water system using wells as a water source, the application shall include a copy or copies of the well drilling permit or permits obtained from the Bureau of Water Allocation in the Department.

(c) In the case of a water system for which water in excess of 100,000 gallons per day is to be diverted the application shall also include a copy of the water supply allocation permit issued by the Bureau of Water Allocation in the Department.

(d) In the case of a water system that will serve 50 or more realty improvements, prior to any final major subdivision plot approval and in addition to the application for certification to the administrative authority, an application for certification shall be submitted to the Department in accordance with N.J.A.C. 7:10-12.42.

(e) The administrative authority shall review the information contained in the application for certification and shall determine whether the proposed water system is in compliance with requirements of this subchapter.

(f) The administrative authority shall notify the applicant in writing of its approval or denial of the application.

(g) Any certification issued by an administrative authority shall be conditioned on the following:

1. Submission and approval of copies of reports and/or certification from the well driller and/or verification by inspection during installation that all well(s) are constructed in accordance with the requirements of this subchapter, all applicable requirements of N.J.S.A. 58:4A-4.1 et seq. and N.J.A.C. 7:9D, and any special conditions of the well permit approvals from the Department.

2. Submission and approval of the results of water quality analyses conducted pursuant to N.J.A.C. 7:10-12.30.

Amended by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

In (g), inserted “. all applicable requirements of N.J.S.A. 58:4A-4.1 et seq. and N.J.A.C. 7:9D,”.

#### 7:10-12.40 Additional requirements for the certification of single dwelling nonpublic water systems and other nonpublic water systems

(a) In addition to the requirements of N.J.A.C. 7:10-12.39, the application for certification of a single dwelling nonpublic or other nonpublic water system shall include the following:

1. An explanation of the need and justification for construction of a single dwelling nonpublic water system or a nonpublic water system in lieu of connection to a public community water system;

2. In the case of a single dwelling realty improvement or any new or altered water source, a surveyor's plot plan or a sketch of the property;

3. In the case of a subdivision containing multiple realty improvements, a plot plan which contains sufficient detail to permit examination and comprehension of the proposed water system; and

4. The plot plan or sketch pursuant to (a)2 and 3 above shall show the locations of all wells and service lines, and sewage disposal systems and other potential sources of contamination within 150 feet of each proposed well. Plot plans shall show the locations of municipal boundaries, roads, streams, sanitary sewers, storm water sewers and drainage channels, test wells, well fields, all existing and proposed water supply and sewage disposal facilities, and service lines and potential sources of contamination within 150 feet of each proposed well. The topography of the property shall be shown by elevations, contours or other suitable method.

(b) The certification issued by the administrative authority for a single dwelling nonpublic or other nonpublic water system shall be conditioned on the submission and approval of a description of the as-built water system that includes the following:

1. If the water source is other than a well, the dependable yield, quality of the water in relation to its treatability, and the methods of construction employed to ensure adequate protection;

2. If the water source is a well or wells, data on the geological strata penetrated during construction, construction features of the well or wells, yield, and water quality;

3. Pumping equipment, including location, type, capacity and method of operational control;

4. Water storage facilities, including location, type, capacity, and operational pressure range;

5. Analytical results regarding the microbiological, physical and chemical quality of the water in accordance with N.J.A.C. 7:10-12.30;

6. Water treatment processes, if any, together with the type and application rate of chemicals to be applied;

7. Treatment and disposal of sludge and filter backwash, if applicable; and

8. Method for the disinfection of all surfaces, prior to the system being placed into operation, with which adequately protected water may come into contact.

**7:10-12.41 Additional requirements for the certification of public noncommunity water systems**

(a) In addition to the requirements of N.J.A.C. 7:10-12.39, the application for certification of a public noncommunity water system shall include the following:

1. An explanation of the need and justification for construction of a public noncommunity water system in lieu of connection to a public community water system;

2. Except as provided in N.J.A.C. 7:9D-1.7, plans and specifications of the proposed water system prepared by a New Jersey-licensed professional engineer and bearing such engineer's seal and signature. Such plans shall be drawn to a suitable scale to facilitate photo-reduction and with sufficient detail to permit examination and comprehension of the proposed water system. The plans shall show the locations of municipal boundaries, roads, streams, sanitary sewers, storm water sewers and drainage channels, test wells, well fields, all existing and proposed water supply and sewage disposal facilities, all distribution mains, service lines, and potential sources of contamination within 200 feet of each proposed well. The topography of the property shall be shown by elevations, contours, or other suitable methods;

3. Information on the number and types of realty improvements to be served, including number of persons expected to use the water, and anticipated water demand; and

4. Information on the size, type of pipe, location, depth and sanitary protection of the distribution mains, and whether such mains are to be used for fire service.

(b) The certification issued by the administrative authority for a public noncommunity water system shall be conditioned on the submission and approval of a description of the as-built water system that includes the information specified at N.J.A.C. 7:10-12.40(b)1 through 8.

(c) All applications for certification to construct or operate a new public nontransient noncommunity water system shall comply with the requirements set forth at N.J.A.C. 7:10-13.5 and 13.6.

Amended by R.2000 d.354, effective August 21, 2000.  
See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

Added (c).  
Amended by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

In (a)2, substituted "Except as provided in N.J.A.C. 7:9D-1.7, plans" for "Plans".

**7:10-12.42 Requirements for certification by the Department of water supply systems for 50 or more realty improvements**

(a) Before any final major subdivision plot approval may be granted by any municipal planning board for 50 or more realty improvements, an application for certification of the water system shall be submitted to the Department. Such application shall be submitted in accordance with this section and shall include plans, specifications and an engineer's report, prepared pursuant to (c) through (e) below by a qualified New Jersey licensed professional engineer. The plans shall bear the engineer's seal as required by N.J.S.A. 45:8-45.

(b) A complete application for certification shall include all of the following:

1. A completed original Standard Application Form obtained from the Department;

i. The application form shall be signed by the owner, or the proper official (with title), as specified on the application form, of the company or corporation constructing the realty improvements. If the application is signed by an authorized agent, a certified copy of the authorization shall be attached.

ii. A copy of the resolution of preliminary subdivision approval from the municipal planning board and specific endorsement(s) of the type of water system(s) (individual wells or public community water system) being proposed;

2. The plans, specifications and engineer's report specified at (a) above;

3. A copy of a Pinelands Certificate of Filing, Notice of Filing, Certificate of Completeness, Preliminary Zoning Permit, resolution of the Pinelands Commission approving the project or a letter from the Pinelands Commission indicating that the project is exempt from the Pinelands Commission review; and

4. The applicable fee pursuant to N.J.A.C. 7:10-15.

(c) The engineer's report shall describe in concept the water system(s) for the proposed realty improvements and shall identify the eventual owner and operator of the water system. The report shall include a detailed evaluation of alternative water systems specifically addressing municipal planning board recommendations, costs, and water quality.

(d) The specifications shall describe the general construction, materials, and equipment to be used for the water system.

(e) If the proposed water system consists of individual wells, the engineering plans shall also include the following:

1. A plan of the proposed subdivision showing lots with their dimensions, contours or original grades, proposed elevation of the final grading shown at corner lots or any contemplated change of slope, drainage right of way and any contemplated diversion thereof affecting the proposed realty improvements, storm sewers, location and depth of all wells and existing water supplies within 500 feet of any realty improvement, and location and depth of proposed wells for the water system;

2. A description of the proposed water system including location of all test wells drilled to investigate water supply potential location of all natural streams and storm water drainage channels on or abutting the subdivision and of any contemplated relocation of same, location of coastal waters when less than one-half mile from the mean high water line and all salt water estuaries and elevation of maximum high water when available, type of well or source of water, estimated depth of wells, and pumping equipment, storage facilities, and purification facilities;

3. An inventory of potential major and minor pollutant sources within the subdivision and of major pollutant sources within 500 feet of the property line of the subdivision and 2,500 feet upgradient of ground water flow.

4. Tentative schedule for construction of the realty improvements and estimated date of availability of and connection to a public community water system if expected.

(f) Such additional information as the Department may request in order to fulfill the requirements of this section.

(g) Depending on the type of proposed water system, the Department will review the application for certification in accordance with the standards for construction set forth at:

1. For public community water systems, N.J.A.C. 7:10-11.
2. For individual wells, N.J.A.C. 7:10-12.

#### 7:10-12.43 Requests for adjudicatory hearings

(a) An applicant for a certification or any person, subject to the limitation on third party appeal rights set forth in P.L. 1993, c.359 (N.J.S.A. 52:4B-3.1 through 3.3), who believes himself or herself to be aggrieved with respect to decisions made by the Department pursuant to this subchapter may contest the decision and request an adjudicatory hearing pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. and the New Jersey Uniform Administrative Procedure Rules, N.J.A.C. 1:1, in accordance with the appeal procedures set forth at N.J.A.C. 7:10-11.17.

(b) Any person who believes himself or herself to be aggrieved with respect to decisions made by the administrative authority may appeal pursuant to the local administrative authority appeal procedure as appropriate.

Amended by R.2000 d.354, effective August 21, 2000.

See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In (a), amended N.J.A.C. reference.

Amended by R.2001 d.313, effective September 4, 2001 (operative October 4, 2001).

See: 32 N.J.R. 2832(a), 33 N.J.R. 3194(a).

### SUBCHAPTER 13. STANDARDS FOR TECHNICAL, MANAGERIAL, AND FINANCIAL CAPACITY OF PUBLIC COMMUNITY AND NONCOMMUNITY WATER SYSTEMS

#### 7:10-13.1 Purpose and scope

This subchapter establishes minimum technical, managerial, and financial capacity requirements for new public community and nontransient noncommunity water systems. These requirements are necessary to prevent approval for operation of a water system which the Department has determined to be non-viable. A non-viable water system is prone to failure or otherwise unable to comply with all maximum contaminant level, treatment technique, and monitoring and reporting requirements established in the Federal and State primary and secondary drinking water regulations.

#### 7:10-13.2 Additional definition

In addition to the words and terms defined at N.J.A.C. 7:10-1.3, the following term is defined for the purposes of this subchapter.

“Capacity” means the overall capability of a water system to reliably produce and deliver water meeting all national primary drinking water regulations and applicable State regulations. Capacity encompasses the technical, managerial, and financial (TMF) capabilities that enable the water system to plan for, achieve, and maintain compliance with applicable drinking water standards.

#### 7:10-13.3 Demonstration of technical capacity for community water systems

(a) An applicant for a permit to construct and operate a new public community water system pursuant to N.J.A.C. 7:10-11.5(a) shall, in addition to requirements set forth in N.J.A.C. 7:10-11.5(d), provide a detailed description of the source of supply, treatment, storage, and distribution of the new water system’s infrastructure, which shall include the following:

1. Identification and evaluation of all critical facilities and equipment whose failure would result in a water outage or water quality failure;
2. Evidence, including a description, of any deeds, leases or easements for land, water supply sources, or physical facilities used in the operation of the system; and

3. Evaluation of the feasibility of connecting to any adjacent water systems and justification why these connections should not be required.

(b) An applicant for a permit to construct and operate a new public community water system pursuant to N.J.A.C. 7:10-11.5(a) shall submit an Infrastructure Replacement Plan that includes:

1. A description of and estimate of life expectancy of all sources of water supply, treatment, and transmission/distribution facilities including pipes, pumping stations, storage facilities, and meters; and

2. An equipment replacement plan including expected replacement date, costs, and sources of funding.

(c) An applicant for a permit to construct and operate a new public community water system pursuant to N.J.A.C. 7:10-11.5(a) shall submit proof of compliance with State operator certification rules, N.J.A.C. 7:10A.

#### 7:10-13.4 Demonstration of managerial and financial capacity for community water systems

(a) No person shall commence operation of a new public community water system prior to obtaining a permit to operate issued by the Department pursuant to N.J.A.C. 7:10-11.5(j).

(b) A written application for a permit to operate shall be submitted in accordance with this section and shall include a description of the as-built water system, and financial and managerial plans pursuant to (c) and (d) below.

(c) The managerial plan shall contain the following:

1. Information concerning the organizational structure of the system including:

i. A description of the organizational structure with a chart showing all aspects of water system management and operation;

ii. A description of the primary responsibilities and identification of all key personnel, including board of directors or councils, involved in the management or operation of the system or personnel;

iii. Identification, including the names and phone numbers, of those responsible for policy decisions ensuring compliance with State regulatory requirements, and the day-to-day operation of the system;

iv. If the person in charge of operation has other responsibilities unrelated to the water system, an explanation as to how the operator will reliably execute his or her responsibilities;

v. Copies of any contracts for management or operation of the water system by persons or agencies other than the system owner; and

vi. A description of how legal, engineering, and other professional services are provided;

2. A description of the qualifications of the owners and managers of the water system, including any training and experience relating to owning or managing a water system. Also, system owners shall include a list of public water systems previously or currently owned as well as any systems previously or currently operated under contract for another owner;

3. A description of a procedure for keeping management personnel informed concerning regulatory requirements for managing and operating a public water system;

4. An emergency management plan that includes:

i. Identification of known and potential natural and human-caused risks to the water system;

ii. Identification of personnel responsible for emergency management;

iii. A description of the notification procedures and means for implementation; and

iv. A description of the emergency response plan for each identified risk;

5. A description of system policies that define the conditions under which water service is provided. The system policies shall include a description of:

i. Water system responsibilities;

ii. Customer responsibilities;

iii. Design and construction standards for system modifications and additions;

iv. Cross-connection control;

v. Developer agreement and "late-comer" (future developers) policies;

vi. Customer information or public education;

vii. The process for investigating and responding to customer complaints;

viii. Budget development and rate structure that includes meter reading and billing schedule; and

ix. Response and notification if water quality violations occur.

(d) A financial plan shall include the following:

1. A five-year budget that includes revenues, operating expenses, reserves, and capital improvements including:

i. A revenue/expenditure analysis that compares all anticipated water system revenues with planned expenditures for the next five years;

ii. Identification of reserve accounts for emergency funding and equipment replacement; and

**7:10-15.2 Payment of fees**

(a) Each supplier of water and each owner or operator of a bulk distribution system shall pay the applicable annual operation fee, in accordance with N.J.A.C. 7:10-15.4, on or before July 1 of each year.

(b) Each supplier of water and each owner or operator of a bulk distribution system shall pay the applicable permit application review fee in accordance with N.J.A.C. 7:10-15.3.

(c) Each applicant for a physical connection permit shall pay the initial physical connection permit fee in accordance with N.J.A.C. 7:10-15.5.

(d) Each applicant for a physical connection permit renewal shall pay the physical connection permit renewal fee in accordance with N.J.A.C. 7:10-15.5.

(e) Payment of fees shall be by check or money order made payable to "Treasurer, State of New Jersey" and submitted to the Department as follows:

1. Permit application review fees and initial physical connection permit fees shall be submitted at the time of application.

2. Annual operation fees and annual physical connection permit renewal fees shall be submitted to the Department within 30 calendar days of the invoice date in accordance with the instructions specified in the invoice.

(f) Each check or money order shall identify the fee being paid and the applicable public water system or physical connection permit identification number.

(g) Any fee under this subchapter that is subject to N.J.A.C. 7:1L shall be payable in installments in accordance with N.J.A.C. 7:1L.

**7:10-15.3 Calculation of permit application review fees**

(a) Except as provided at (d) and (e) below, the permit application review fee for the construction and/or modification of a public water system and/or bulk distribution system shall be determined as follows:

1. Step One: Multiply that part of the project construction cost that is:

- i. Less than or equal to \$250,000 by 0.9 percent;
- ii. Between \$250,001 and \$1,000,000 by 0.6 percent; and
- iii. More than \$1,000,000 by 0.3 percent.

2. Step Two: Sum the figures calculated under (a)1 above to obtain the fee due. For example, if the project cost is \$1,100,000, the fee is calculated as the sum of 0.9 percent of the first \$250,000 ( $0.009 \times \$250,000 = \$2,250$ ) plus 0.6 percent of the next \$750,000 ( $0.006 \times \$750,000 = \$4,500$ ) plus 0.3 percent of the amount

greater than \$1,000,000 ( $0.003 \times \$100,000 = \$300$ ) equals \$7,050.

(b) The maximum and minimum permit application review fees which the Department will assess are \$12,000 and \$100.00, respectively.

(c) For an application for a permit that includes a new source of water supply (excluding interconnection or bulk purchase sources), a permit application review fee of \$1,000 for each such new source shall be submitted in addition to the fee calculated pursuant to (a) above.

(d) For an application for a permit to construct a distribution system pursuant to N.J.A.C. 7:10-11.10, the permit application review fee shall be determined in accordance with the following schedule, irrespective of the project construction cost:

1. For each master permit and master permit renewal, the permit application review fee shall be as follows, where Class 1 through 4 are as defined at N.J.A.C. 7:10-15.4(a):

Class 1	\$ 500
Class 2	\$1,000
Class 3	\$2,500
Class 4	\$5,000

2. For each permit to construct a water main pursuant to N.J.A.C. 7:10-11.10(b)1, the permit application review fee shall be \$250.

3. For each permit to construct a water main pursuant to N.J.A.C. 7:10-11.10(b)2, the permit application review fee shall be the greater of the amounts calculated based on the number of proposed service connections or the water main length in accordance with the following table:

Service Connections	Water Main Length (ft)	Fee Required
50 to 100	1,500 to 3,000	\$1,000
101 to 250	3,001 to 7,500	\$2,500
251 to 500	7,501 to 15,000	\$4,000
more than 500	more than 15,000	\$5,000

4. For each permit to construct an interconnection with another public community water system pursuant to N.J.A.C. 7:1011.10(b)2, the permit application review fee shall be \$250 or, if the interconnecting water main length is 1,500 feet or more, the amount calculated based on the interconnecting water main length in accordance with the table at (d)3 above.

(e) For each application submitted pursuant to N.J.A.C. 7:10-12.42, the fee shall be \$1,000.

Amended by R.2000 d.354, effective August 21, 2000.  
See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In (a), deleted "community" following "public" in the introductory paragraph.

**7:10-15.4 Calculation of annual operation fees**

(a) For the purpose of determining the annual operation fee, each public community water system and bulk distribution system shall be classified on the basis of population served as of July 1 of each year, as follows:

1. Class 1: 25 to 999 people;
2. Class 2: 1,000 to 9,999 people;
3. Class 3: 10,000 to 49,999 people; and
4. Class 4: 50,000 or more people.

(b) During the initial year of operation, the annual operation fee as calculated pursuant to (c) below for a new public water system or a new bulk distribution system shall be paid on or before the first day of operation and shall be prorated as follows:

1. For a system which begins operation on or after July 1 up to and including September 30, the full annual operation fee;
2. For a system which begins operation on or after October 1 up to and including December 31, three-quarters of the annual operation fee;

3. For a system which begins operation on or after January 1 up to and including March 31, one-half of the annual operation fee; and

4. For a system which begins operation on or after April 1 up to and including June 30, one-quarter of the annual operation fee.

(c) The annual operation fee for a public water system or bulk distribution system shall be determined in accordance with the following table:

<u>Class</u>	<u>Fee for System without Water Treatment</u>	<u>Fee for System with Water Treatment</u>
Class 1	\$ 60	\$ 120
Class 2	\$ 360	\$ 720
Class 3	\$ 790	\$1,580
Class 4	\$1,640	\$3,280

Amended by R.2000 d.354, effective August 21, 2000.  
See: 31 N.J.R. 2717(a), 32 N.J.R. 3106(a).

In (c), changed Class 2 Fee for System without Water Treatment from \$60 to \$360.

**7:10-15.5 Fees for physical connection permits**

(a) The initial physical connection permit review fee shall be \$150.00.

(b) The physical connection permit renewal fee shall be \$200.00.