

N.H. DYER, M.D., M.P.H.
STATE DIRECTOR OF HEALTH



State of West Virginia

DEPARTMENT OF HEALTH

CHARLESTON 25305

February 11, 1976


The Honorable James R. McCartney
Secretary of State
State Capitol
Charleston, West Virginia 25305

Dear Sir:

Enclosed are two copies of "Cross-Connection and Backflow Prevention Regulations", designated Chapter 16-1, Series VIII of the West Virginia Administrative Regulations. These regulations cancel and supersede Section 11.0 of the "Public Water Supply Regulations" dated December 1, 1969.

I hereby certify that the attached regulations are true and accurate copies of official regulations adopted by the West Virginia State Board of Health on January 21, 1976.

Sincerely yours,


N.H. Dyer, M.D., M.P.H.
State Director of Health

NHD/JHH/lm

Enclosures

FILED IN THE OFFICE OF
SECRETARY OF STATE OF
WEST VIRGINIA

THIS DATE FEB 13 1976

PUBLIC WATER SUPPLY

OPERATOR REGULATIONS



FILED IN THE OFFICE
EDGAR F. HEISKELL III
SECRETARY OF STATE
THIS DATE 9/30/74

ADOPTED BY THE
WEST VIRGINIA
STATE BOARD OF HEALTH
SEPTEMBER 18, 1974

EFFECTIVE
NOVEMBER 1, 1974

TABLE OF CONTENTS

	PAGE
Section 1.0 General	1
Section 2.0 Definitions	2
Section 3.0 Classification of Public Water Supplies	3
Section 4.0 Certification of Water Plant Operators	5
Section 5.0 Requirements for Certification of Water Plant Operators	6
Section 6.0 Operator in Training	7
Section 7.0 Qualifications for Certification	8
Section 8.0 Education - Experience Credits	8
Section 9.0 Application for Examination and Certification	9
Section 10.0 Revocation of Certificates	10
Section 11.0 Reciprocity	10
Section 12.0 Repeal of Former Regulations	11
Section 13.0 Severability	11
Section 14.0 Penalties	11

WEST VIRGINIA STATE BOARD OF HEALTH

CHAPTER 1, ARTICLE 5A

PUBLIC WATER SUPPLY OPERATOR REGULATIONS

SECTION 1.0 GENERAL

1.1 Scope

1.1.1 This Article replaces Section 9.0 of Article 5, Chapter 1, "Registration and Certification of Water Plant Operators." Section 9.0 of Article 5, Chapter 1 is hereby repealed.

1.1.2 These regulations establish the rules and requirements of the West Virginia State Board of Health governing the examination and certification of operators of Public Water Supplies.

1.2 Authority - The authority for these regulations is provided under Chapter 16, Article 1, Public Health Laws, Code of West Virginia. Pursuant to the authority conferred upon the West Virginia State Board of Health, Chapter 16, Article 1, Public Health Laws, Code of West Virginia, these regulations are hereby established as the requirements for the examination and certification operators of public water supplies.

1.3 Filing Date - On September 30, 1974, as prescribed by State Law, these regulations were filed with the Office of the Secretary of State, State of West Virginia.

1.4 Certification - These regulations were certified as being received and on file in the Office of the Secretary of State, State of West Virginia on September 30, 1974.

1.5 Effective Date - These regulations shall be in full force and effect on November 1, 1974.

SECTION 2.0 DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of these regulations.

2.1 DIVISION OF SANITARY ENGINEERING - As used in this regulation, it is the Division of Sanitary Engineering, State Department of Health.

2.2 PERSON - Individual, city, town, public service district, partnership, association, company, corporation, government corporation, institution, department, division, bureau, agency, or any other entity recognized by law.

2.3 PUBLIC WATER SUPPLY - Any water supply or system subject to regulation and control of the Public Service Commission of this state, or which supplies or offers to supply water to the general public.

2.4 PUBLIC WATER SUPPLY SYSTEM - Includes the works and auxiliaries for the collection, treatment, storage and distribution of the water from the source of supply to the ultimate customer.

2.5 PUBLIC WATER SUPPLY TREATMENT PLANT - Facilities provided for the treatment of water, by any one or any combination of the controlled processes of coagulation, sedimentation, filtration, disinfection or other processes which produce a water consistently meeting the requirements of the State Department of Health.

2.6 CERTIFICATE - A written document issued by the

Division of Sanitary Engineering giving a designated person permission to operate a specific class of public water supply or system upon successful completion of the education, experience and examination requirements contained in these regulations.

2.7 OPERATOR IN TRAINING - A person who meets the educational requirements and is in the process of completing the experience requirements for class I certification.

2.8 OPERATOR - A person who has been granted a certificate by the Division of Sanitary Engineering to operate a specific class of public water supply or system.

2.9 CERTIFIED OPERATOR - An operator holding a certificate granted by the Division of Sanitary Engineering of a class at least equal to that required by the water treatment plant classification where he is employed.

2.10 ON SITE RESPONSIBILITY - The responsibility of a certified operator to be present at the treatment plant while the plant is in operation.

SECTION 3.0 CLASSIFICATION OF PUBLIC WATER SUPPLIES

3.1 Public water supplies shall be classified on the basis of complexity of treatment plants and for the total population served.

3.1.1 The system of classification for treatment plants shall be based on a total point rating as computed by the point system classification shown in sub-section 3.1.2 of these regulations.

3.1.2 POINT SYSTEM CLASSIFICATION OF WATER TREATMENT PLANTS

<u>ITEM</u>	<u>POINT RATING SYSTEM</u>	<u>POINTS RATED</u>
<u>Size</u>		
Maximum population served	1 per 12,500 or part thereof	_____
Design flow (average day) or peak month's production (average day), whichever larger	1 per 1.25 MGD or part thereof	_____
<u>Water Supply Source</u>		
Groundwater	3 (each source)	_____
Surface water	10 (each source)	_____
<u>Elementary Treatment</u>		
Aeration for CO ₂	2	_____
pH adjustment	4	_____
Corrosion control	1 - 8	_____
Taste and odor control	1 - 8	_____
Color control	4	_____
Activated carbon feed	4	_____
<u>Advanced Treatment</u>		
Iron or Iron/Manganese removal	5 - 10	_____
Softening	5 - 10	_____
Coagulation (10) Flocculation (5) sedimentation (5)	20 (maximum)	_____
Filtration	10 - 15	_____
Exotic processes (Rev. osmosis, electrodialysis, etc.)	20	_____
<u>In-Plant treatment of plant sludge</u>	6	_____
<u>Fluoridation</u>	5	_____
<u>Disinfection Pre (5) Post (5)</u>	10 (maximum)	_____
On-site generation of disinfectant	5	_____
<u>Laboratory Control by Plant Personnel</u>		
Bacteriological (complexity)	1 - 10	_____
Chemical/physical (complexity)	1 - 10	_____
Others (as determined by the Division of Sanitary Engineering)		_____
<u>TOTAL POINT RATING</u>		=====

3.2 Classification of public water supplies shall be based on the following table:

PUBLIC WATER SUPPLY CLASSIFICATION SYSTEM¹

Basis of Classification	Classes			
	I	II	III	IV ²
Treatment Plant Total Point Rating	0 to 25	26 to 50	51 to 75	76 or more
Population Served	0 to 1500	1501 to 15,000	15,001 to 50,000	50,001 or more

1 If the ranges of total point rating and population differ from those contained in the table, the Division of Sanitary Engineering shall determine the appropriate public water supply classification.

2 All Class IV public water supplies must have bacteriological laboratories certified by the State Hygienic Laboratory.

SECTION 4.0 CERTIFICATION OF WATER PLANT OPERATORS

4.1 All persons operating a public water supply or system in this state shall be certified by the Division of Sanitary Engineering in accordance with these regulations.

4.2 On and after November 1, 1974, the date these regulations become effective, it shall be illegal for any person to operate, or to be in charge of operation of a public water supply or system unless said person possesses an operator's certificate issued by the Division of Sanitary Engineering.

4.3 Anyone who has on-site responsibility for a public water supply or system shall be a certified operator.

4.4 Certification of operators shall be based upon education, experience, and satisfactory completion of a written examination given by the Division of Sanitary Engineering. All certificates shall be prominently displayed at the water treatment plant where the operator is employed.

SECTION 5.0 REQUIREMENTS FOR CERTIFICATION OF WATER PLANT OPERATORS

5.1 Operator's possessing certificates before the effective date of these regulations will be issued new certificates by the Division of Sanitary Engineering in accordance with the following schedule:

<u>Existing Certification</u>	<u>New Certification</u>
OTT (Operator in Training) OTT	OTT
III	I
II	II
I	III or IV (See Section 5.3)

5.2 Operators who, up until the effective date of these regulations, were certified as class II-R or I-R shall be re-certified on the basis of their education and experience as determined by the Division of Sanitary Engineering.

5.3 Operators who were certified as class I operators before the effective date of these regulations and were employed full time at a class IV public water supply, as defined in these regulations, shall be entitled to class IV re-certification. All such operators shall submit their request for re-certification in writing to the Division of Sanitary Engineering for approval.

5.4 Those persons not now certified, and who desire certification after the effective date of these regulations, will be classified in accordance with the education-experience requirements under Section 7.0 and examination requirements under Section 9.0 of these regulations.

SECTION 6.0 OPERATOR IN TRAINING (OIT)

6.1 A certificate of this class is limited to new personnel without prior experience.

6.2 Written application for an operator in training certificate shall be made to the Division of Sanitary Engineering, on a form furnished by the Division, within one month after employment as an operator trainee.

6.3 Operators under the OIT certificate must be under the supervision of a certified operator.

6.4 Operator in training certificates shall be valid for one year. The individual will be considered for re-certification if he makes a written application for same to the Division of Sanitary Engineering thirty days prior to certificate expiration.

SECTION 7.0 QUALIFICATIONS FOR CERTIFICATION

7.1 Class I - High school diploma or equivalent and one year of operating experience at a water treatment plant as an operator in training.

7.2 Class II - High school diploma or equivalent and three years operating experience in a class I, II, III, or IV water treatment plant.

7.3 Class III - Fourteen years of education or equivalent and five years operating experience in a class II, III or IV water treatment plant.

7.4 Class IV - Sixteen years of education or equivalent and six years operating experience in a class III or IV water treatment plant.

SECTION 8.0 EDUCATION - EXPERIENCE CREDITS

8.1 Twelve years of education means high school diploma, G.E.D., or other equivalent. Thirty college semester hours shall equal 45 quarter hours and either shall equal one year of college credit.

8.2 Experience, at the next certification level below that applied for, may be substituted on a year for year basis for the educational requirements beyond the high school level through the fourteenth year. However, any experience used as a substitute for the educational requirements cannot also be credited toward satisfying experience requirements.

8.3 Education, above the high school level, may be substituted on a year for year basis for experience requirements in classes II, III and IV only. However,

any education used as a substitute for the experience requirements cannot also be credited toward satisfying education requirements.

- 8.4 A maximum of six months educational credit may be permitted by the Division of Sanitary Engineering if an applicant has successfully completed an approved Water Plant Operators training or correspondence course. Written proof of course completion and a request for approval of credit must be submitted in writing to the Division of Sanitary Engineering with the application for examination.

SECTION 9.0 APPLICATION FOR EXAMINATION AND CERTIFICATION

- 9.1 Those persons not certified as of the effective date of these regulations, may make a request for examination to the Division of Sanitary Engineering at least thirty days prior to the examination date by completing a form furnished by the Division of Sanitary Engineering or county health department.

- 9.2 Written examinations for certification will be arranged by the Division of Sanitary Engineering for those persons who meet the educational requirements. The times and places for the examination will be designated by the Division of Sanitary Engineering which shall notify the applicants of same at least two weeks before the examination date.

- 9.3 An applicant's certification status shall be determined by his examination grade, educational and experience background. To pass the examination an applicant must make a minimum grade of 70 percent. An applicant who fails an examination must wait a minimum of sixty days before applying for re-examination.

SECTION 10.0 REVOCATION OF CERTIFICATES

- 10.1 The Division of Sanitary Engineering may revoke the certificate of any person who fraudulently obtains a certificate or for neglect, incompetency, or misconduct in the performance of his duties as an operator of a public water supply system, including non-compliance with Chapter 1, Article 5, of the Environmental Health Regulations which relates to Public Water Supply control tests, bacteriological quality sampling and operating records. The Division of Sanitary Engineering may reinstate any person whose certificate has been revoked upon presentation of satisfactory evidence to the Division that all deficiencies have been corrected.

- 10.2 The Division of Sanitary Engineering may revoke a certificate for cause and require a certificate holder to take another written examination at his last certification class if he has not been actively engaged in water supply treatment operation for a two-year period.

- 10.3 An operator employed at a public water supply shall notify the Division of Sanitary Engineering at least thirty (30) days prior to terminating his employment. Failure to notify the Division of Sanitary Engineering shall be cause for automatic certificate revocation; however, automatic revocation shall not occur if the operator has been discharged by his supervisor.

SECTION 11.0 RECIPROCIITY

The Division of Sanitary Engineering shall consider for West Virginia certification, the holder of a certificate issued by a governmental agency of another state upon presentation to the Division of Sanitary Engineering satisfactory evidence of the following:

(1) The applicant has been offered and agrees to accept full time employment as a certified public water supply system operator in West Virginia.

(2) The applicant has successfully passed a certification examination at least equivalent to that which is required under this regulation.

SECTION 12.0 REPEAL OF FORMER REGULATIONS

All regulations previously adopted by the West Virginia Board of Health which are in conflict with the provisions of these regulations are hereby repealed.


SECTION 13.0 SEVERABILITY

Each Section of this regulation and every part of each Section is an independent Section and a part of a Section, and the holding of any Section or part thereof to be unconstitutional, void, or ineffective for any cause does not affect the validity or constitutionality of any other Section or part thereof.

SECTION 14.0 PENALTIES

Any person who violates any provision of these regulations or any regulation adopted by the West Virginia State Board of Health pursuant to the authority granted by these regulations shall be guilty of a misdemeanor and shall upon conviction be punished by a fine of not more than \$200.00 or by imprisonment for not more than 30 days or both fine and imprisonment as provided in Chapter 16, Article 1, Section 20 of the Public Health Laws of West Virginia, West Virginia Code. Each day's failure to comply with any applicable provision of these regulations shall constitute a separate offense.

I hereby certify that the foregoing regulations constitute the official regulations adopted by the State Board of Health on September 18, 1974, and filed pursuant to law in the Office of Secretary of State, State of West Virginia.


N. H. Dyer, M.P., M.P.H.
State Director of Health

Acknowledgement, that the above regulations were filed with the Office of Secretary of State on this 30th day of September 1974.

Edgar F. Heiskell, III
Secretary of State

SEAL

WEST VIRGINIA ADMINISTRATIVE REGULATIONS
State Department of Health

Chapter 16-1
Series VIII

Subject: Public Water Supply Operator Regulations

1. This regulation is filed in the odd size file as item number 13.

FEB 13 1976

FILING OF ADMINISTRATIVE REGULATIONS

References are to sections in West Virginia Administrative Regulations 16-1, Series VIII.

Section	1.0	General
Section	2.0	Definitions
Section	3.0	Cross-Connections
Section	4.0	Where Protection Is Required
Section	5.0	Type of Protection Required
Section	6.0	Backflow Prevention Devices
Section	7.0	Plans, Surveys, Investigations, and Testing
Section	8.0	Prohibited Devices
Section	9.0	Repeal of Former Regulations
Section	10.0	Severability
Section	11.0	Penalties
Section	12.0	Certification and Filing of the Regulations

FEB 13 1976

WEST VIRGINIA STATE BOARD OF HEALTH

CHAPTER 1, ARTICLE 5B

CROSS-CONNECTIONS AND BACKFLOW PREVENTION REGULATIONS

			PAGE
SECTION	1.0	GENERAL	1
SECTION	2.0	DEFINITIONS	1
SECTION	3.0	CROSS-CONNECTIONS	4
SECTION	4.0	WHERE PROTECTION IS REQUIRED	5
SECTION	5.0	TYPE OF PROTECTION REQUIRED	6
SECTION	6.0	BACKFLOW PREVENTION DEVICES	8
SECTION	7.0	PLANS, SURVEYS, INVESTIGATIONS, AND TESTING	8
SECTION	8.0	PROHIBITED DEVICES	9
SECTION	9.0	REPEAL OF FORMER REGULATIONS	10
SECTION	10.0	SEVERABILITY	10
SECTION	11.0	PENALTIES	10
SECTION	12.0	CERTIFICATION AND FILING OF THE REGULATIONS	10

FEB 13 1976

WEST VIRGINIA STATE BOARD OF HEALTH

CHAPTER 1, ARTICLE 5B

CROSS-CONNECTIONS AND BACKFLOW PREVENTION REGULATIONS

SECTION 1.0 GENERAL

1.1 Scope

1.1.1 This article replaces Section 11.0 of Article 5, Chapter 1, "Public Water Supply Regulations". Section 11.0 of Article 5, Chapter 1 is hereby repealed.

1.1.2 These regulations establish the rules and requirements of the West Virginia State Board of Health governing cross-connections and backflow prevention.

1.2 Authority - The authority for these regulations is provided under Chapter 16, Article 1, Public Health Laws, Code of West Virginia.

1.3 Filing Date - On _____, as prescribed by State Law, these regulations were filed with the Office of the Secretary of State, State of West Virginia.

1.4 Certification - These regulations were certified as being received and on file in the Office of the Secretary of State, State of West Virginia on _____

1.5 Effective Date - These regulations shall be in full force and effect on April 1, 1976.

SECTION 2.0 DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of these regulations.

2.1 AIR GAP SEPARATION - A physical separation between the free-flowing discharge end of a water supply pipe and an open to atmosphere receiving vessel having a minimum unobstructed vertical distance between the supply pipe discharge point and the flood level rim of the receptacle of twice the diameter of the supply pipe or one inch (2.54 cm), whichever is greater.

2.2 APPROVED - As used in these regulations shall mean accepted by the Division of Sanitary Engineering as being suitable for the proposed use.

FEB 13 1976

- 2.3 APPROVED BACKFLOW PREVENTION DEVICE - An air gap separation, barometric loop, double check valve assembly, reduced pressure backflow prevention device, vacuum breaker device, or other device or means approved by the Division of Sanitary Engineering for preventing backflow.
- 2.4 AUXILIARY WATER SUPPLY - Any water source or system available within the building or premises other than the public water supply, including, but not limited to individual wells, springs and cisterns. A private water storage tank supplied by a public water supply system is considered an auxiliary water supply unless its design meets the minimum design standards required for storage tanks for public water supplies and the water contained therein is potable.
- 2.5 BACKFLOW - The entry or flow into a public or potable water supply system of liquids, gases or substances from any other source.
- 2.6 BACKSIPHONAGE - Backflow caused by less than atmospheric pressure in a water system.
- 2.7 BAROMETRIC LOOP - A loop of pipe rising at least thirty-five (35) feet (10.67 m) above the highest outlet served by the pipe.
- 2.8 CHECK VALVE - A mechanical self-closing device designed to permit the flow of fluids in one direction only and to close upon reversal of flow.
- 2.9 CROSS-CONNECTION - Any physical connection or other arrangement whereby backflow of liquids, gases or other substances into any public or potable water supply may occur.
- 2.10 DEGREE OF HAZARD - As used in these regulations shall mean the potential risk to health and potential adverse effects upon the public water supply based on the probability of backflow occurring and the type or nature of the contaminant.
- 2.11 DIVISION OF SANITARY ENGINEERING - As used in these regulations shall mean the Division of Sanitary Engineering, West Virginia State Department of Health.
- 2.12 DOUBLE CHECK VALVE ASSEMBLY - An assembly consisting of two single independently acting check valves with watertight valves located at each end of the assembly, and suitable pressure gauges and/or connections for testing the watertightness of each check valve.
- 2.13 FLOOD LEVEL RIM - The edge of the vessel or receptacle from which water overflows.
- 2.14 HEALTH HAZARD - Any condition, device or practice which in the judgment of the Health Officer or the Division of Sanitary Engineering creates or may create a danger to the

FEB 13 1976

health and well being of the water consumer.

- 2.15 HEALTH OFFICER - The State Director of Health or his authorized representative.
- 2.16 INTERCHANGEABLE CONNECTION - An arrangement or device which allows the alternate but not simultaneous use of two sources of water.
- 2.17 LOW PRESSURE CUT-OFF DEVICE - A switch or device designed to shut off a pump when the pressure at the suction side of the pump falls below a specified level.
- 2.18 NON REMOVABLE DEVICE - A device requiring special tools for removal or where removal will result in damage to the device or the connection thereto.
- 2.19 PERSON - Individual, partnership, association, syndicate, company, firm, trust, corporation, government corporation, institution, department, division, bureau, agency, or any entity recognized by law.
- 2.20 POTABLE WATER - Water free from impurities in amounts sufficient to cause disease or harmful physiological effects, with bacteriological, chemical, physical and radiological quality conforming to applicable regulations and standards of the State Department of Health.
- 2.21 PUBLIC WATER SUPPLY - Any water supply or system subject to regulation and control of the Public Service Commission of this state, or which supplies or offers to supply water to the general public.
- 2.22 PUBLIC WATER SUPPLY SYSTEM - Includes the works and auxiliaries for the collection, treatment, storage and distribution of the water from the source of supply to the ultimate consumer's premises.
- 2.23 REDUCED PRESSURE BACKFLOW PREVENTION DEVICE - An assembly containing a minimum of two independently acting check valves, an automatically operated pressure differential relief valve located between the two check valves, and watertight valves located at each end of the assembly, together with suitable pressure gauges and/or connections for testing the operation of the device.
- 2.24 WATER CONSUMER - The owner or person in charge of any building or premises supplied by or in any manner connected to a public water system.
- 2.25 WATER PURVEYOR - The person operating a public water supply.
- 2.26 WATER SERVICE LINE - A pipe or water line, with or without

FEB 13 1976

a meter and valves, whereby water is conveyed from the public water supply system to the initial point of use by the consumer.

- 2.27 VACUUM BREAKER DEVICE - A device consisting of a moveable disc or check valve and an atmospheric vent designed so that a pressure less than atmospheric in the supply line will open the vent and prevent backsiphonage.

SECTION 3.0 CROSS-CONNECTIONS

- 3.1 No person shall install or maintain a cross-connection between a public water supply system or service line connected to a public water supply system, and any other source whereby non-potable water or other contaminating substances may enter the public water supply system.
- 3.2 No person shall install or maintain a cross-connection between public water supply system or service line connected to a public water supply system and that of any auxiliary or other water supply unless such supply and the inter-connection have been approved in writing by both the purveyor and the Division of Sanitary Engineering.
- 3.3 The water purveyor shall not install a water service connection to any premises where a violation of Sections 3.1 or 3.2 of these regulations exists.
- 3.4 The water purveyor shall discontinue, after written notice to the occupants, water service to any premises where a cross connection or unauthorized connection to an auxiliary supply exists or where required backflow prevention devices have not been installed or have been removed or by-passed, or where the water purveyor, Health Officer, or Division of Sanitary Engineering is denied entry to confirm compliance with these Regulations. Water service to the premises shall not be restored until the deficiencies have been corrected.
- 3.5 No person shall install or maintain any cross-connection between any water supply system serving a public use facility or business establishment and any non potable source whereby non potable water may be dispensed to or be used by the general public.
- 3.6 Where an investigation by the Division of Sanitary Engineering, Health Officer, or purveyor discloses that a cross-connection exists, the owner or person occupying or having charge of the premises where such cross-connection exists, shall remove such cross connection or install an approved backflow prevention device as directed by the Health Officer or Division of Sanitary Engineering.

FEB 13 1976

SECTION 4.0 WHERE PROTECTION IS REQUIRED

- 4.1 An approved backflow prevention device shall be installed on each service line to a premises where, the Health Officer or the Division of Sanitary Engineering has determined that a potential or actual health hazard or other degradation of the public water supply exists.
- 4.2 An approved backflow prevention device shall be installed on each service line serving, but not necessarily limited to, the following types of facilities unless investigation by the Division of Sanitary Engineering determines that no potential or actual health hazard or other degradation of the public water supply exists.
- 4.2.1 Hospitals, mortuaries, clinics, nursing homes, animal hospitals;
 - 4.2.2 Laboratories;
 - 4.2.3 Sewage treatment plants, sewage pumping stations, storm water pumping stations;
 - 4.2.4 Chemical plants, dyeing plants, metal plating industries, tanneries;
 - 4.2.5 Petroleum processing or storage plants;
 - 4.2.6 Slaughterhouses, poultry processing plants, food or beverage processing plants;
 - 4.2.7 Piers, docks, waterfront facilities;
 - 4.2.8 Photo development plants;
 - 4.2.9 Car washes, laundermats;
 - 4.2.10 Public swimming pools;
 - 4.2.11 Farms where the water is used for other than household purposes;
 - 4.2.12 Other facilities specified by the Division of Sanitary Engineering.
- 4.3 An approved backflow prevention device shall be installed on each service line serving premises where any of the following conditions exist:
- 4.3.1 Premises having internal cross-connections that, in the judgement of the water purveyor, Health Officer, or the Division of Sanitary Engineering,

FEB 13 1976

are not correctable or having intricate plumbing arrangements which make it impractical to determine whether or not cross-connections exist;

- 4.3.2 Premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a cross-connection survey;
 - 4.3.3 Premises having a repeated history of cross-connections being established or re-established;
 - 4.3.4 Others specified by the Division of Sanitary Engineering.
- 4.4 An approved backflow prevention device shall be installed to isolate the following systems or facilities, from potable or public water supply systems unless the Division of Sanitary Engineering determines that no health hazard to the public water supply system exists. Such installation may be required regardless of other protective devices required by these regulations.
- 4.4.1 Lawn sprinkler systems, irrigation systems;
 - 4.4.2 Fire service systems;
 - 4.4.3 Laboratory facilities.

SECTION 5.0 TYPE OF PROTECTION REQUIRED

- 5.1 The type of protection required under these Regulations shall depend on the degree of hazard which exists or may exist as determined by the Division of Sanitary Engineering.
- 5.1.1 An approved air gap separation shall be installed where, in the judgement of the Division of Sanitary Engineering, a public water supply may be contaminated with substances that could cause a severe health hazard.
 - 5.1.2 An approved air gap separation or an approved reduced pressure principle backflow prevention device shall be installed where in the judgement of the purveyor or the Division of Sanitary Engineering, a public water supply may be contaminated with any substance that could cause a health hazard.

FEB 13 1976

- 5.1.3 An approved air gap separation or an approved reduced pressure principle backflow prevention device or an approved double check valve assembly shall be installed where in the judgement of the purveyor or the Division of Sanitary Engineering, a public water supply may be contaminated with any substance that could degrade the water quality or adversely affect the public water supply system.
- 5.1.4 An approved non removable vacuum breaker device or barometric loop may be installed where the degree of hazard is low and where backflow can occur by backsiphonage only. Such installation shall be as close as practical to the potential contaminating source.
- 5.1.5 Barometric loops or vacuum breakers are not acceptable as backflow prevention devices where backflow due to back pressure may occur.
- 5.2 An approved air gap separation or an approved interchangeable connection with a non removable reduced pressure backflow prevention device shall be installed at any point of connection between a public water supply and any auxiliary water supply not approved by the purveyor and the Division of Sanitary Engineering.
- 5.3 Any booster pump installed within a premises served by a public water supply or on the service line to such premises shall be equipped with a check valve on the discharge line and low pressure cut-off designed to shut-off the booster pump when the pressure in the service line on the suction side of the pump drops to twenty-five (25) pounds per square inch gauge (129.25 cm Hg) or less, unless it is determined by the Division of Sanitary Engineering that an adequate supply exists to prevent the creation of a negative pressure in the service line.
- 5.4 Pumping stations within the public water supply distribution system shall be equipped with a low pressure cut-off designed to shut off the booster pump when the pressure in the distribution line on the suction side of the pump drops to twenty-five (25) pounds per square inch (129.25 cm Hg) or less, unless it is determined by the Division of Sanitary Engineering that an adequate supply exists to prevent the creation of a negative pressure in the distribution system.

FEB 13 1976

- 5.5 The requirements of Section 7.4 shall apply to the low pressure cut-off device.
- 5.6 At premises where backflow prevention devices are required by this regulation and the public interest requires continuous uninterrupted service, two approved backflow prevention devices shall be installed in parallel and properly valved to permit continuous operation, or service to the premises shall be from two separate service lines protected by approved backflow prevention devices.

SECTION 6.0 BACKFLOW PREVENTION DEVICES

- 6.1 Any backflow prevention device required by these Regulations shall be installed at a location and in such manner as to facilitate testing and servicing and at a location and in a manner approved by the purveyor and the Division of Sanitary Engineering.
- 6.2 Any backflow prevention device required by these Regulations shall be purchased, installed, maintained, and tested by, and at the expense of the consumer except as provided for in Section 6.3.
- 6.3 Nothing in these Regulations shall prohibit the purveyor from installing or testing backflow prevention devices at his own expense or prohibit mutual agreement between the purveyor and the consumer for such installation.
- 6.4 When any backflow prevention device required by these Regulations is found to be defective, the consumer shall immediately notify the purveyor and the Division of Sanitary Engineering of such defect and shall at his own expense within ten (10) days repair, replace, or overhaul such device.

SECTION 7.0 PLANS, SURVEYS, INVESTIGATIONS, AND TESTING

- 7.1 Where backflow prevention or other devices are required by these regulations the consumer shall provide the Division of Sanitary Engineering any drawings, plans, specifications and other data required to insure compliance with these regulations.
- 7.2 The water purveyor shall establish a cross-connection and backflow prevention program acceptable to the Division of Sanitary Engineering and consistent with the extent of the public water supply system.
- 7.3 On request by the water purveyor, or the Division of Sanitary Engineering the water consumer shall furnish the water purveyor information on water use practices and facilities within the consumer's premises, in-

FEB 13 1976

cluding plumbing diagrams, drawings, or plans as required.

- 7.4 The water consumer on any premises on which backflow prevention devices required by these regulations are installed, shall have inspections and operational tests made of the devices at intervals and in a manner as required by the water purveyor or the Division of Sanitary Engineering. Inspections and tests shall be at the expense of the water consumer and shall be performed by a person certified by the Division of Sanitary Engineering as qualified to inspect and test backflow prevention devices. Records of all inspections and tests shall be provided to the water purveyor.
- 7.5 The water purveyor shall maintain records of all inspections, surveys, tests and corrective actions taken. Records shall be maintained for a period of at least two years and shall be furnished upon request to the Division of Sanitary Engineering.
- 7.6 The water purveyor and authorized representatives of the Health Officer or the Division of Sanitary Engineering shall have the right to enter premises served by the public water supply, except private dwellings, at all reasonable times for the purpose of making surveys and investigations of water use practices within the premises.
- 7.7 Where new water service connections are being furnished to private dwellings formerly served by individual wells, or to dwellings where there is reason to believe that cross-connections exist, the purveyor shall request permission to inspect the premises to determine if violations of these regulations may exist. Water service shall not be provided until such inspection is made and violations corrected.
- 7.8 No provision of these regulations shall relieve the water consumer of the responsibility for conducting surveys of water use practices on his premises to determine whether there are actual or potential cross-connections.
- 7.9 Activities required by these regulations shall be in accordance with all applicable guidelines and design standards contained in the Division of Sanitary Engineering Bulletin, EW-114, "Cross-Connection and Backflow Prevention Manual".

SECTION 8.0 PROHIBITED DEVICES

No person shall install, maintain, sell, or distribute for sale any device of a type which has been determined by the Division of Sanitary Engineering to contain actual or potential cross-connections.

FEB 13 1976

SECTION 9.0 REPEAL OF FORMER REGULATIONS

All regulations previously adopted by the West Virginia State Board of Health, which are in conflict with the provisions of these regulations are hereby repealed.

SECTION 10.0 SEVERABILITY

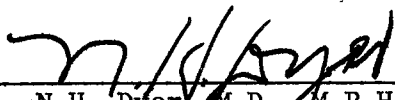
Each section of these regulations and every part of each Section is an independent Section and a part of a Section, and the holding of any Section or part thereof to be unconstitutional, void, or ineffective for any cause does not affect the validity or constitutionality of any other Section or part thereof.

SECTION 11.0 PENALTIES

Any person who violates any provision of these regulations or any regulation adopted by the West Virginia State Board of Health pursuant to the authority granted by these regulations shall be guilty of a misdemeanor and shall upon conviction be punished by a fine of not more than \$200.00 or by imprisonment for not more than 30 days or both fine and imprisonment as provided in Chapter 16, Article 1, Section 20 of the Public Health Laws of West Virginia, West Virginia Code. Each day's failure to comply with any applicable provision of these regulations shall constitute a separate offense.

SECTION 12.0 CERTIFICATION AND FILING OF THE REGULATIONS

I hereby certify that the foregoing regulations constitute the official regulations adopted by the State Board of Health on January 21, 1976, and filed pursuant to law in the office of Secretary of State, State of West Virginia.



N.H. Dyer, M.D., M.P.H.
State Director of Health

Acknowledgement, that the above regulations were filed with the Office of Secretary of State on 2/13/76.



James R. McCartney
Secretary of State

FILED IN THE OFFICE OF
SECRETARY OF STATE OF
WEST VIRGINIA

THIS DATE FEB 13 1976