July 16, 2001

ORDINANCE NO. 2001-04
OF THE
BOARD OF SUPERVISORS
TOWNSHIP OF SUMMIT
ERIE COUNTY, PENNSYLVANIA

PROVIDING FOR PROTECTION OF THE PUBLIC WATER SUPPLY SYSTEM BY THE CONTROL OF BACKFLOW AND CROSS-CONNECTIONS.

WHEREAS, the Summit Township Water Authority ("Authority") owns and operates a public water supply system serving portions of Summit Township; and

WHEREAS, in order for the Authority to properly operate and maintain the public water system it is necessary for the Summit Township Supervisors to adopt an ordinance for control and backflow and cross-connections to the public water system; and

WHEREAS, Section 109.709 of the Pennsylvania Department of Environmental Protection Rules and Regulations (25 PA Code Chapter 109) provides legal basis for establishment of backflow and cross-connection control program as herein contained; and

NOW THEREFORE, the Board of Supervisors of the Township of Summit, Erie County, Pennsylvania, hereby enact and ordain that:

SECTION 1 - GENERAL POLICY

1.0 Purpose – The Purpose of this Ordinance is:

A. To protect the public water supply system from contamination or pollution by isolating within the consumer's water system contaminants or pollutants which could backflow through the service connection into the public water supply system.

B. To promote the elimination of cross-connections, actual or potential, between the public or consumer's potable water system and non-potable water systems, plumbing fixtures and sources or systems containing process fluids.

C. To provide for the maintenance of a continuing program of cross-connection control which will systematically and effectively prevent the contamination or pollution of the public and consumer's potable water system.

1.1 Application – This Ordinance shall apply to all premises served by the public water system of the Summit Township Water Authority.

1.2 Policy – The public water supplier and the consumer have the joint responsibility for protection of the public water supply system from contamination due to backflow of contaminants through the water service connection. Prior to connecting to the system, the consumer shall verify backflow prevention requirements with the public water supplier. If in the judgment of the public water supplier or his authorized representative an approved backflow prevention device is required the supplier shall notify the consumer to install such approved backflow prevention device at each service connection to his premises. Prior to receiving water service, the consumer shall install such approved device or devices at his own expense. Failure, refusal or inability on the part of the consumer to install such device or devices shall constitute grounds for disconnecting water service to the premises until such device or devices have been installed.

SECTION 2 – DEFINITIONS

2.1 Air Gap Separation (AG) – Means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying potable water to a tank, plumbing fixture, or other potable water to a tank, plumbing fixture, or other device and the flood level rim of the receptacle. The differential distance shall be at least double the diameter (2 X D) of the supply pipe measured. Vertically, above the top of the rim of the vessel. In no cases, shall the air gap be less than one (1) inch.

2.2 Approved – Means that the backflow prevention device or method has been accepted by the public water supplier as suitable for the proposed use.

2.3 Atmospheric Vacuum Breaker (AVB) – The term "atmospheric vacuum breaker" (also known as the non-pressure type vacuum breaker) shall mean a device containing a shut-off valve followed by a valve body containing a float-check, a check seat and an air inlet port. When the shut-off valve is open, the flow of water causes the float to close the air inlet port. When the shut-off valve is closed, the float falls and forms a check valve against back siphonage and at the same time opens the air inlet port.

2.4 Auxiliary Water Systems – Means any water source or system on the premises of or available to the customer except connections to other approved public water supply systems.

2.5 Backflow – Means a flow condition, induced by a differential in pressure, that causes the flow of water or mixtures of water and other liquids, gases or other substances into the distribution pipes of a potable water supply system from a source other than its intended source.

2.6 Backflow Preventer – A device or other means approved by the public water supplier which will prevent the backflow of water or liquids of questionable quality into the public water supply system.

2.7 Backsiphonage – Means the backflow of water or mixture of water and other liquids, gases or other substances from a plumbing fixture or other customer source, into a public water supply system main due to a temporary negative or sub-atmospheric pressure within the public water supply system.

2.8 Consumer – Means the owner or person in control of any premises supplied by or in any manner connected to a public water supply system.

2.9 Consumer's water system – means any water system, located on the consumer's premises, supplied by or in any manner connected to a public water supply system. A household plumbing system is considered to be a consumer's water system.

2.10 Containment – Means cross-connection control which isolates the customer's entire facility from the public water supply system so as to provide the protection necessary to prevent contamination of the public water supply in the event of backflow from the customer's facility.

2.11 Contamination – Means of degradation of the quality of the drinking water by wastewaters, processed fluids, or any water of a quality less than accepted drinking water quality to a degree which would create an actual hazard to the public health through poisoning or through the spread of disease.

2.12 Cross-Connection – An arrangement allowing either a direct or indirect connection through which backflow, inducing backsiphonage, can occur between the drinking water in a public water supply system and a system containing a source or potential source of contamination.

2.13 Degree of Hazard – Means an evaluation of the potential risk to health and the adverse effect upon the public water supply system.

2.14 Double Check Valve Assembly (DCVA) – Means an assembly composed of two single, independently acting, check valves including tightly closing shut-off valves located at each end of the assembly and suitable connections for testing the water tightness of each check valves.

2.15 Health Hazard – Means any condition, device or practice in a water system or its operation that creates, or may create, a danger to the health and well being of its users. The word "severe" as used to qualify "health hazard" means a hazard tot he health of the user that could reasonably be expected to result in the significant morbidity or death.

2.16 Non-Potable Water – Means water not safe for drinking, personal, or culinary use.

2.17 Person – Any individual, partnership, association, company, corporation, municipality, municipal authority, political subdivision or any agency of Federal or State government. This term includes the officers, employees and agents of any partnership, association, company corporation, municipality, municipal authority, political subdivision or any agency of Federal or State government.

2.18 Pollution – Means the presence in water of any foreign substance that tends to degrade its qualify to as to constitute a hazard or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonable affect such waters for domestic use.

2.19 Potable Water – Means water which is satisfactory for drinking culinary, and domestic purposes and meets the requirements of the PA Department of Environmental Protection.

2.20 Process Fluids – Means any fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, pollutional, or system hazard if introduced into the public or a consumer's water system. This includes, but is not limited to:

A. Polluted or contaminated waters;

B. Process waters;

C. Used waters originating from the public water system which may have deteriorated in sanitary quality;

D. Cooling waters;

E. Contaminated natural waters taken from wells, lakes, streams, or irrigation systems;

F. Chemicals in solution or suspension;

G. Oils, gases, acids, alkalis, and other liquids and gaseous fluids used in industrial or other processes, or for fire fighting purposes;

H. Heating system waters from boilers or heat pumps.

2.21 Public Water Supplier – The Summit Township Water Authority.

2.22 Public Water Supply System – The water supply system owned, operated and maintained by the Summit Township Water Authority.

2.23 Reduced Pressure Zone Device (RPD) – Means a minimum of two independently acting check valves, together with an automatically operated pressure differential relief valve located between the two check valves. During normal flow and at the cessation of normal flow, the pressure between these two checks shall be less than the supply pressure. In case of leakage of either check valve, the differential relief valve, by discharging to the atmosphere, shall operate to maintain the pressure between the checks at less than the supply pressure. The unit must include tightly closing shut-off valves located at each end of the device, and each device shall be fitted with properly located test cocks.

2.24 Service Connection – Means the terminal end of a service line from the public water supply system. If a meter is installed at the end of the service, then the service connection means the downstream end of the meter.

2.25 System Hazard – Means a condition posing an actual or potential threat of damage to the physical properties of the public water system or the consumer's potable water system.

SECTION 3 – WATER SYSTEM

3.1 The water system shall be considered as made of up two parts: the public water supply system and the consumer's water system.

3.2 The public water system supply shall consists of the source facilities and the distribution system, and shall include all those facilities of the public water supply system under the control of the public water supplier up to the point where the consumer's water system begins.

3.3 The source shall include all components of the facilities utilized in the production, treatment, storage and delivery of water to the public distribution system.

3.4 The public distribution system shall include the network of conduits used for delivery of water from the source to the consumer's water system.

3.5 The consumer's water system shall include all facilities beyond the service connection which are not under the control of the public water supplier and are utilized by the consumer in conveying water from the public distribution system to points of use.

SECTION 4 – CROSS CONNECTIONS PROHIBITED

4.1 Any physical connection or arrangement between two otherwise separate pipe systems, one of which contains potable water from the public water system and the other steam, gas, chemical or other water supply is prohibited. A cross-connection shall be considered broken if a minimum air gap of two pipe diameters or the water supply pipe is provided between the public water supply and any other water supply.

4.2 Interconnection of two or more different water supplies shall not be permitted. Private wells or other water supplies shall be physically disconnected from lines supplied by the public water system.

SECTION 5 – SURVEY AND INVESTIGATIONS

5.1 The consumer's premises shall be open at all reasonable times to the public water supplier, or his authorized representative, for the purposes of conducting surveys and investigations of water use practices within the consumer's premises to determine whether there are actual or potential cross-connections to the consumer's water system through which contaminations or pollutants could backflow into the public potable water system.

5.2 On request by the public water supplier the consumer shall furnish information on water use practices within his premises.

5.3 It shall be the responsibility of the water consumer to conduct periodic surveys of water use practices on his premises to determine whether there are actual or potential cross-connections to his water system through which contaminants or pollutants could backflow into the public water supply system.

SECTION 6 – WHERE PROTECTION IS REQUIRED

6.1 An approved backflow prevention device shall be installed prior to the first branch line leading off each service line to a consumer's water system where, in the judgment of the public water supplier, an actual or potential hazard to the public water supply system exists.

6.2 An approved backflow prevention device shall be installed on each service line to a consumer's water system where the following conditions exist:

A. Systems having an auxiliary water supply, unless such auxiliary supply is accepted as an additional source by the public water supplier and approved as a public water supply system pursuant to rules and regulations promulgated by the PA Department of Environmental Protection.

B. Systems where any substance is handled in such a fashion as to create an actual or potential hazard to the public water supply system. This shall include systems having sources or auxiliary systems containing process fluids or water originating from the public water supply system which are not longer under the sanitary control of the water purveyor.

C. Systems where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete cross-connection survey.

D. Systems having a repeated history of cross-connections being established or re-established.

E. Other conditions specified by the public water supplier.

6.3 An approved backflow prevention device shall be installed on each service line to a consumer" water system serving, but not necessarily limited to, the facilities listed under Section 7.2 if this Ordinance unless the public water supplier determines that no actual or potential hazard to the public water supply system exists. The Township or Authority reserves the right to require that other types of facilities not specifically listed in Section 7.2 be required to install approved backflow prevention devices if deemed necessary.

SECTION 7 - TYPE OF PROTECTION REQUIRED

7.1 The type of protection required under Section 6.1, 6.2 and 6.3 of these regulations shall depend on the degree of hazard which exists as follows:

A. An approved air gap separation shall be installed where the public water supply system may be contaminated with substances that are dangerous to the public health and could cause a severe health hazard.

B. An approved air gap separation or an approved reduced pressure zone backflow prevention device shall be installed where the public water supply system may be contaminated with a substance that could cause a system or health hazard.

C. An approved air gap separation or an approved reduced pressure zone backflow prevention device or an approved double check valve assembly shall be installed where the public water supply system may be polluted with substance that would be objectionable but not dangerous to health.

7.2 The required backflow prevention devices for specific types of facilities is outlined below. This list is not all inclusive and the Township or Authority reserves the right to modify or amend this listing when deemed necessary to comply with the intent of this Ordinance.

Building, Plant or Facility	Type of Device To Be Used
A. Automatic Car/Truck Wash; Automatic Plants; Auxiliary Water Systems; Chemical Plants; Dye Works; Film Processing; Irrigation Systems; Laboratories; Meat Packing and Reduction Plants; Metal Plating Plants; Paper and Paper Products; Plating Plants; Power Plants; Rubber Plants; Sand/Gravel Plants; Sewage/Stormwater Treatment Facility; Sewage/Stormwater Ejector or Pumping Station; Medical Clinic; Medical/Dental Building; Hospital; Mortuary; Morgue; Schools and Laboratories; Building with Sewage Ejector; Manufacturing/Processing/Fabrication Plants using Toxic Materials.	AG, RPD

B.	Dairies/Cold Storage Plants; Laundries.	RPD, DCVA
C.	Swimming Pools; Convalescent/Nursing Homes; Multipurpose Commercial/Office Buildings over three stories; Schools and Colleges; Apartment/Hotel with Restaurant; Apartment/Hotel over three stories; Restaurant; Supermarket; Building with Booster Pump or Storage Tank; Manufacturing/Processing/Fabrication Plant using Non-Toxic Materials; Water System with Private Hydrants; Building with Fire Protection Pumper Connection (Wet or Dry); Building over three stories with fire protection in-line booster pump (Wet System).	DCVA, RPD
D	Building or Water System with Fire Protection System where anti-freeze or inhibitors are used; Building or Water System with Fire Protection System where and Auxiliary Water Source is available and connected to the Fire System.	RPD
E.	Temporary connections for construction or other purposes.	AVB

SECTION 8 - BACKFLOW PREVENTION DEVICES

8.1 Any backflow prevention device required by this Ordinance shall be of a model or construction approved by the public water supplier and shall comply with the following:

A. Air gap (AG) separation shall be at least twice the diameter of the supply pipe, measured vertically above the top rim of the vessel, but in no case less than one inch.

B. A double check valve assembly (DVCA) or a reduced pressure zone backflow prevention device (RPD) shall be approved by the public water supplier and shall mean a device that has been manufactured in full conformance with standards established by the American Water Works Association entitled:

AWWA/ANSI C510-92 – Standard for DCVA
AWWA/ANSI C511-92 – Standard for RPD

C. An approved assembly should also have met completely the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California (USC FCCCHR) established in:

Specifications of Backflow Prevention Assemblies – Section 10 of the most current Edition of the Manual of Cross-Connection Control.

D. Reduced Pressure Zone Devices shall not be installed below ground level and shall be protected from freezing.

E. Double Check Valve Assemblies and Reduced Pressure Zone Devices shall be installed to provide adequate space to facilitate maintenance and testing.

SECTION 9 - INSTALLATION

9.1 Backflow prevention devices required by this Ordinance shall be installed at a location and in a manner approved by the public water supplier and shall be installed by a person properly qualified and at the expense of the water consumer.

9.2 Backflow prevention devices installed on the service line to a consumer's water system shall be located on the consumer's side of the water meter, as close to the meter as is reasonably practical, and prior to any other connection.

9.3 Pits or vaults shall be of water-tight construction, be so located and constructed as to prevent flooding and shall be maintained free from standing water by means of either a sump and pump or a suitable drain. Such sump pump or drain shall not connect to a sanitary sewer nor permit flooding of the pit or vault by reverse flow from its point of discharge. An access ladder and adequate natural or artificial lighting shall be provided to permit maintenance inspection and testing of the backflow prevention device.

SECTION 10 - INSPECTION AND MAINTENANCE

10.1 It shall be the duty of the consumer at any premises on which backflow prevention devices required by this Ordinance are installed to have inspections, tests and over haul made in accordance with the following schedule or more often where inspections indicate a need.

A. Air separation shall be inspected at time of installation and at least every twelve months thereafter.

B. Double check valves assemblies shall be inspected and tested for tightness at the time of installation and at least every twelve months thereafter.

They shall be dismantled, inspected internally, cleaned and repaired whenever needed and at least every five years.

C. Reduced pressure zone backflow prevention devices shall be inspected and tested for tightness at the time of installation and at least every twelve months thereafter.

They shall be dismantled, inspected internally, cleaned and repaired whenever needed and at least every five years.

10.2 Inspections, tests, an overhaul of backflow prevention devices shall be performed by a person certified by the public water supplier to inspect, test and overhaul backflow prevention devices.

10.3 Whenever backflow prevention devices required by these regulations are found to be defective, they shall be repaired, or replaced at the expense of the consumer without delay.

10.4 The water consumer must maintain a complete record of each backflow prevention device from the purchase to retirement. This shall include a comprehensive listing that includes a record of all tests, inspections and repairs.

10.5 Backflow prevention devices shall not be bypassed, made inoperative, removed or otherwise made ineffective without specific authorization by the water supplier.

10.6 Testing of Backflow Preventers is the responsibility of the property owner and will be done every year within the month of the anniversary date of the valve installation. The Backflow Preventer valves will be rebuilt and tested at the five (5) year anniversary date. Results of tests and rebuilding must be logged by the tester and kept in a neat readable ledger and a copy of the test results furnished to the property owner and the public water supplier within ten (10) days of the date of the test and signature of the tester noted on the tag attached to the valve.

SECTION 11 - BOOSTER PUMPS

11.1 Where a booster pump has been installed on the service line to or within any premises, such pump shall be equipped with a low pressure cut-off device designed to shut-off the booster pump when the pressure in the service line on the suction side of the pump drops to ten pounds per square inch gauge or less for a period of 30 seconds or longer.

11.2 It shall be the duty of the water consumer to maintain the low pressure cut-off device in proper working order and to certify to the public water supplier, at least once a year, that the device is operating properly.

SECTION 12 - VIOLATIONS

12.1 The public water supplier shall deny or discontinue, after reasonable notice to the occupants thereof, the water service to any premises wherein any backflow prevention device required by this Ordinance is not installed, tested and maintained in a manner acceptable to the public water supplier, or if it is found that the backflow prevention device has been removed or bypassed, or if an unprotected cross-connection exists on the premises, or if a low pressure cut-off device required by these regulations is not installed and maintained in working order.

12.2 Water service to such premises shall not be restored until the consumer has corrected or eliminated such conditions or defects in conformance with these regulations and to the satisfaction of the public water supplier.

SECTION 13 - HYDRANTS

13.1 Only authorized persons shall be permitted to use fire hydrants. Tampering with the hydrants by unauthorized persons is prohibited. Any person wishing to use the hydrants (other than the public water supplier and fire companies) must have a permit issued by the public water supplier. A special area will be made available where the permit holder can draw water safely. This especially pertains to exterminator/lawn complies.

SECTION 14 - AUTHORIZATION

14.1 The Summit Township Water Authority or their designated agents are hereby authorized and directed to do all matter and things required to be done by this Ordinance for the purpose of carrying out the purposes herein intended.

SECTION 15 - SEVERABILITY

15.1 If any of the provisions or part of this Ordinance or the application of any provision hereof shall, for any reason be held invalid, such invalidity shall not affect or impair any of the remainder of this Ordinance, if being the intention of the Board of Supervisors that such remainder shall be and remain in full force and effect.

DULY PRESENTED AND ENACTED at a meeting of the Board of Supervisors of the Township of Summit, Erie County, Pennsylvania held the 16th day of July, 2001.

Paul L Dahlkemper
Supervisor

Shirley A. King
Supervisor

M. J. Loos
Supervisor

Attest:

Shawn L Ryan
Secretary