

VILLAGE OF ANTIOCH

14-03-04

**AN ORDINANCE AMENDING CHAPTER 8-3 OF THE MUNICIPAL CODE OF
ANTIOCH PROVIDING IMPROVED BACKFLOW REGULATIONS**

ADOPTED BY THE PRESIDENT AND BOARD OF TRUSTEES

OF THE

VILLAGE OF ANTIOCH, ILLINOIS

ON

MARCH 3, 2014

Published in pamphlet form by authority of the Village Board
of the Village of Antioch, Lake County, Illinois,
this 5th day of March, 2014.

LAWRENCE M. HANSON	President	DENNIS B. CROSBY	Trustee
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ORDINANCE 14-03-04

AN ORDINANCE AMENDING CHAPTER 8-3 OF THE MUNICIPAL CODE OF ANTIOCH PROVIDING IMPROVED BACKFLOW REGULATIONS

WHEREAS, the Village water supply could be compromised in the event that water consumers improperly connect potable water lines to sources of contaminated water, and

WHEREAS, the Village has long had strong regulations intended to protect the potable water supply from such contamination, also known as “backflow”, and

WHEREAS, the Illinois EPA has indicated that even stronger regulations should be adopted, including an increased mandate for improved record-keeping and database management, and

WHEREAS, the Village staff has recommended that the record-keeping and database management functions would be better handled by an outside company with particular expertise in this area, both on a cost-benefit analysis and on a public safety basis as well, and

WHEREAS, the Village Board finds that providing for a single-sourced and competent company to be known as a “Backflow Compliance Manager” will improve public safety at a reasonable cost both to the Village and to the water consumers,

NOW THEREFORE, BE IT ORDAINED by the Village of Antioch, Lake County, Illinois, as follows:

SECTION ONE: Chapter 8-3 of the Antioch Municipal Code is hereby amended and shall hereafter read as set forth on Exhibit A hereto, with additions underlined and deletions ~~stricken~~, and with additional unmarked corrections of typographic errors in the existing code sections.

SECTION TWO: This Ordinance shall be in full force and effect from and after its passage, approval and publication as required by law.

PASSED BY THE BOARD OF TRUSTEES OF THE VILLAGE OF ANTIOCH, ILLINOIS,
ON THIS 3 DAY OF MARCH, 2014.

ATTEST:


LAWRENCE M. HANSON, MAYOR


LORI K. FOLBRICK, VILLAGE CLERK



STATE OF ILLINOIS)
) SS
COUNTY OF LAKE)

CERTIFICATE

I, Lori K. Folbrick, certify that I am the duly appointed Municipal Clerk of the Village of Antioch, Lake County, Illinois.

I certify that on March 3, 2014, the Corporate Authorities of such municipality passed and approved **Ordinance No. 14-03-04**, entitled “***AN ORDINANCE AMENDING CHAPTER 8-3 OF THE MUNICIPAL CODE OF ANTIOCH PROVIDING IMPROVED BACKFLOW REGULATIONS***” which provided by its terms that it should be published in pamphlet form.

The pamphlet form of **Ordinance No. 14-03-04**, including the Ordinance and cover sheet thereof, was prepared, and a copy of such Ordinance was posted in the municipal building, commencing on March 5, 2014 and continuing for at least ten days thereafter. Copies of such Ordinance were also available for public inspection upon request in the office of the Municipal Clerk.

DATED at Antioch, Illinois, this 5th day of March, 2014


Lori K. Folbrick, RMC/CMC
Village Clerk



8-3-1: PURPOSE AND APPLICABILITY:

A. Purpose: The purpose of this chapter is:

1. To protect the public water supply system from contamination or pollution by isolating within the customer's water system contaminants or pollutants which could backflow through the service connection into the public water supply system;
2. To promote the elimination or control of existing cross connections, actual or potential, between the public or consumer's potable water system and nonpotable water systems, plumbing fixtures and sources or systems containing substances of unknown or questionable safety; and
3. To provide for the maintenance of a continuing program of cross connection control which will prevent the contamination or pollution of the public and consumer's potable water systems.
4. To provide for a single-sourced data compliance provider to ensure safety of the water supply and improved accountability for testing, maintenance, and record-keeping.
5. To ensure that duly authorized users of cross-connection devices bear the entire cost associated with the use, testing, and maintenance of such devices.

B. Applicability: This chapter shall apply to all premises served by the public potable water supply system of the village.

8-3-2: PUBLIC POLICY:

The owner or official custodian shall be responsible for protection of the public water supply system from contamination due to backflow or back siphonage of contaminants through the customer's water service connection. If, in the judgment of the superintendent of water or his authorized representative, an approved backflow prevention device is necessary for the safety of the public water supply system, the superintendent of water shall give notice to the consumer to install such approved backflow prevention device at each service connection to the premises. The consumer shall immediately 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 immediately shall constitute grounds for discontinuing water service to the premises until such device or devices have been installed. The consumer shall retain records of installation, maintenance, testing and repair as required in subsection 8-3-6D of this chapter for a period of at least five (5) years. The superintendent of water may require the consumer to submit a cross connection inspection report to the village to assist in determining whether or not service line protection will be required. All cross connection inspections shall be conducted by a cross connection control device inspector certified by the Illinois Environmental Protection Agency.

8-3-3: DEFINITIONS:

For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning:

AGENCY: The Illinois Environmental Protection Agency.

APPROVED: Overflow prevention devices or methods approved by the Research Foundation for Cross Connection Control of the University of Southern California, Association of State Sanitary Engineers, American Water Works Association, American National Standards Institute or certified by the National Sanitation Foundation.

AUXILIARY WATER SYSTEM: Any water source or system on or available to the premises other than the public water supply system and includes the water supplied by the system. These auxiliary waters may include water from another purveyor's public water supply system; water from a source such as wells, lakes or streams, or process fluids; or used water. These waters may

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be polluted, contaminated, objectionable, or constitute a water source or system over which the water purveyor does not have control.

BACKFLOW: The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water system from any source other than the intended source of the potable water supply.

BACKFLOW PREVENTION DEVICE: Any device, method or type of construction intended to prevent backflow into a potable water system. All devices used for backflow prevention in Illinois must meet the standards of the Illinois plumbing code and the Illinois environmental protection Agency.

BACKFLOW COMPLIANCE MANAGER: An independent company designated by the Village Board via resolution from time to time and charged with the responsibility for periodically advising water consumers of the need for periodic testing of any backflow prevention device, and which maintains the database of testing information that the Village is required to maintain pursuant to applicable regulations of the Agency.

CONSUMER OR CUSTOMER: The owner, official custodian or person in control of any premises supplied by or in any manner connected to a public water system.

CONSUMER'S WATER SYSTEM: Any water system located on the customer's premises. A building plumbing system is considered to be a customer's water system.

CONTAMINATION: An impairment of the quality of the water by entrance of any substance to a degree which could create a health hazard.

CROSS CONNECTION: Any physical connection or arrangement between two (2) otherwise separate piping systems, one of which contains potable water and the other a substance of unknown or questionable safety or quality, whereby there may be a flow from one system into the other.

DIRECT CROSS CONNECTION: A cross connection formed when a water system is physically joined to a source of unknown or unsafe substance.

DOUBLE CHECK VALVE ASSEMBLY: An assembly composed of single, independently acting check valves approved under ASSE Standard 1015. A double check valve assembly must include tight shutoff valves located at each end of the assembly and suitable connections for testing the water tightness of each check valve.

FIXED PROPER AIR GAP: The unobstructed vertical distance through the free atmosphere between the water discharge point and the flood level rim of the receptacle.

HEALTH HAZARD: Any condition, device or practice in a water system or its operation resulting from a real or potential danger to the health and well-being of consumers. The word severe as used to qualify health hazard means a hazard to the health of the user that could be executed to result in death or significant reduction in the quality of life.

INDIRECT CROSS CONNECTION: A cross connection through which an unknown substance can be forced, drawn by vacuum or otherwise introduced into a safe potable water system.

INSPECTION: A plumbing inspection to examine carefully and critically all materials, fixtures, piping and appurtenances, appliances and installations of a plumbing system for compliance with requirements of the Illinois plumbing code, 77 Illinois administrative code 890.

NONPOTABLE WATER: Water not safe for drinking, personal or culinary use as determined by the requirements of 35 Illinois administrative code 604.

PLUMBING: The actual installation, repair, maintenance, alteration or extension of a plumbing system by any person. Plumbing includes all piping, fixtures, appurtenances and appliances for a supply of water for all purposes, including, without limitation, lawn sprinkler systems from the

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source of a private water supply on the premises or from the main in the street, alley or at the curb to within and about any building or buildings where a person or persons live, work or assemble. Plumbing includes all piping, from discharge of pumping units to, and including, pressure tanks in water supply systems. Plumbing includes all piping, fixtures, appurtenances and appliances for a building drain and a sanitary drainage and updated ventilation system of any building or buildings where a person or persons live, work or assemble, from the point of connection of such building drain to the building sewer or private sewage disposal system five feet (5') beyond the foundation walls.

POLLUTION: The presence of any foreign substance (organic, inorganic, radiological or biological) in water that tends to degrade its quality so as to constitute a hazard or impair the usefulness of the water.

POTABLE WATER: Water which meets the requirements of 35 Illinois administrative code 604 for drinking, culinary and domestic purposes.

POTENTIAL CROSS CONNECTION: A fixture or appurtenance with threaded hose connection, tapered spout or other connection which would facilitate extension of the water supply line beyond its legal termination point.

PROCESS FLUID: 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 potable 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 supply system which may have deteriorated in sanitary quality;
- D. Cooling waters;
- E. Questionable or contaminated natural waters taken from wells, lakes, streams or irrigation systems;
- F. Chemicals in solution or suspension;
- G. Oils, gases, acids, alkalis and other liquid and gaseous fluids used in industrial or other processes, or for firefighting purposes.

PUBLIC WATER SUPPLY: All mains, pipes and structures through which water is obtained and distributed to the public, including wells and well structures, intakes and cribs, pumping stations, treatment plants., reservoirs, storage tanks and appurtenances, collectively or severally, actually used or intended for use for the purpose of furnishing water for drinking or general domestic use and which serve at least fifteen (15) service connections or which regularly serve at least twenty five (25) persons at least sixty (60) days per year. A public water supply to either a community water supply or a noncommunity water supply.

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE: A device containing a minimum of two (2) independently acting check valves together with an automatically operated pressure differential relief valve located between the two (2) check valves and approved under ASSE Standard 1013. During normal flow and at the cessation of normal flow, the pressure between these two (2) 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 check valves at less than the supply pressure. The unit must include tightly closing shutoff valves located at each end of the device, and each device shall be fitted with properly located test cocks.

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SERVICE CONNECTION: The opening, including all fittings and appurtenances at the water main through which water is supplied to the user.

SURVEY: The collection of information pertaining to a customer's piping system regarding the location of all connections to the public water supply system and must include the location, type and most recent inspection and testing date of all cross connection control devices and methods located within that customer's piping system. The survey must be in written form, and should not be an actual plumbing inspection.

SYSTEM HAZARD: A condition through which an aesthetically objectionable or degrading material not dangerous to health may enter the public water supply system or a consumer's potable water system.

USED WATER: Any water supplied by a public water supply system to a consumer's water system after it has passed through the service connection and is no longer under the control of the water supply official custodian.

VILLAGE: The Village of Antioch, Lake County, Illinois.

WATER PURVEYOR: The owner or official custodian of a public water system.

8-3-4: WATER SYSTEM:

- A. The water system shall be considered as made up of two (2) parts: the public water supply system and the consumer's water system.
- B. The public water supply system shall consist of the source facilities and the distribution system, and shall include all those facilities of the potable water system under the control of the superintendent of water up to the point where the consumer's water system begins.
- C. The source shall include all components of the facilities utilized in the production, treatment, storage and delivery of water to the public water supply distribution system.
- D. The public water supply distribution system shall include the network of conduits used to deliver water from the source to the consumer's water system.
- E. The consumer's water system shall include all parts of the facilities beyond the service connection used to convey water from the public water supply distribution system to points of use.

8-3-5: CROSS CONNECTIONS PROHIBITED:

Connections between potable water systems and other systems or equipment containing water or other substances of unknown or questionable quality are prohibited except when and where approved cross connection control devices or methods are installed, tested and maintained to insure proper operation on a continuing basis.

- A. No physical connection shall be permitted between the potable portion of a supply and any other water supply not of equal or better bacteriological and chemical quality as determined by inspection and analysis by the Agency.
- B. There shall be no arrangement or connection by which an unsafe substance may enter a supply.

8-3-6: SURVEYS AND INVESTIGATIONS:

- A. The consumer's premises shall be open at all reasonable times to the approved cross connection control device inspector for the inspection of the presence or absence of cross connections within the consumer's premises and testing, repair and maintenance of cross connection control devices within the consumer's premises.
- B. On request by the superintendent of water, or his authorized representative, the consumer shall furnish information regarding the piping system or systems or water use within the customer's premises. The consumer's premises shall be open at all reasonable times to the

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superintendent of water for the verification of information submitted by the inspection consumer to the public water supply custodian regarding cross connection inspection results.

C. It shall be the responsibility of the water consumer to arrange 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 his or the public potable water system. All cross connection control or other plumbing inspections must be conducted in accordance with 225 Illinois Compiled Statutes 320/3.

D. It is the responsibility of the water consumer to prevent backflow into the public water system by ensuring that:

1. All cross connections are removed; or approved cross connection control devices are installed for control of backflow and back-siphonage.
2. Cross connection control devices shall be installed in accordance with the manufacturer's instructions.
3. Cross connection control devices shall be inspected at the time of installation and at least annually by a person approved by the Agency as a cross connection control device inspector (CCCDI). The inspection of mechanical devices shall include physical testing in accordance with the manufacturer's instructions.
4. Testing and records:
 - a. Each device shall be tested at the time of installation and at least annually, or more frequently, if recommended by the manufacturer.
 - b. Records submitted to the community public water supply shall be available for inspection by Agency personnel in accordance with 415 Illinois Compiled Statutes 5/4.
 - c. Each device shall have a tag attached listing the date of most recent test, name of CCCDI, and type and date of repairs.
 - d. A maintenance log shall be maintained and include:
 - (1) Date of each test;
 - (2) Name and approval number of person performing the test;
 - (3) Test results;
 - (4) Repairs or servicing required;
 - (5) Repairs and date completed; and
 - (6) Servicing performed and date completed.

8-3-7: REQUIRED PROTECTION:

A. An approved backflow device shall be installed on all connections to the public water supply as described in the plumbing code, 77 Illinois administrative code 890, and the Agency's regulations, 35 Illinois administrative code 680. In addition, an approved backflow prevention device shall be installed on each service line to a consumer's water system serving premises, where in the judgment of the superintendent of water, actual or potential hazards to the public water supply system exist.

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

1. Premises having an auxiliary water supply, unless such auxiliary supply is accepted as an additional source by the superintendent of water and the source is approved by the Agency;
2. Premises on which any substance is handled which can create an actual or potential hazard to the public water supply system. This shall include premises having sources or

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- systems containing process fluids or waters originating from the public water supply system which are no longer under the sanitary control of the superintendent of water;
3. Premises having internal cross connections that, in the judgment of the superintendent of water and/or the cross connection control device inspector, are not correctable or intricate plumbing arrangements which make it impractical to determine whether or not cross connections exist;
 4. Premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete cross connection survey; or
 5. Premises having a repeated history of cross connections being established or reestablished.

C. An approved backflow device shall be installed on all connections to the public water supply as described in the plumbing code, 77 Illinois administrative code 890, and the Agency's regulations 35 Illinois administrative code 653. In addition, an approved backflow prevention device shall be installed on each service line to a consumer's water system serving, but not necessarily limited to, the following types of facilities unless the superintendent of water determines that no actual or potential hazard to the public water supply system exists:

- Car washes
- Chemical plants
- Factories
- Farm service and fertilizer plants and trucks
- Food or beverage processing plants
- Gas stations
- Grocery stores
- Hospitals, mortuaries, clinics, nursing homes
- Laboratories
- Meat markets
- Metal plating industries
- Pesticide, herbicide or extermination plants and trucks
- Petroleum processing or storage plants
- Piers, docks, waterfront facilities
- Radioactive material processing plants or nuclear reactors
- Sewage treatment plants, sewage pumping stations or storm water pumping stations
- Stores where water is used for processing products

8-3-8: TYPES OF PROTECTION REQUIRED:

A. The type of protection required under section 8-3-7 of this chapter shall depend on the degree of hazard which exists as follows:

1. An approved fixed proper air gap separation shall be installed where the public water supply system may be contaminated with substances that could cause a severe health hazard;
2. An approved fixed proper air gap separation or an approved reduced pressure principle backflow prevention assembly shall be installed where the public water supply system may be contaminated with a substance that could cause a system or health hazard; or
3. An approved fixed proper air gap separation or an approved reduced pressure principle backflow prevention assembly or a double check valve assembly shall be installed where

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the public water supply system may be polluted with substances that could cause a pollution hazard not dangerous to health.

B. The type of protection required under section 8-3-7 of this chapter shall be an approved fixed proper air gap separation or an approved reduced pressure principle backflow prevention device.

C. Where a public water supply or an auxiliary water supply is used for a fire protection system, reduced pressure principle backflow preventers shall be installed on fire safety systems connected to the public water supply when:

1. The fire safety system contains antifreeze, fire retardant or other chemicals;
2. Water is pumped into the system from another source;
3. Water flows by gravity from a nonpotable source or water can be pumped into the fire safety system from any other source; or
4. There is a connection whereby another source can be introduced into the fire safety system.

D. All other fire safety systems connected to the potable water supply shall be protected by a double check valve assembly on metered service lines and a double detector check valve assembly on unmetered service lines.

8-3-9: BACKFLOW PREVENTION DEVICES:

A. All backflow prevention devices or methods required by this chapter shall be approved by the Research Foundation for Cross Connection Control of the University of Southern California, American Water Works Association, American Society of Sanitary Engineering, or American National Standards Institute or certified by the National Sanitation Foundation to be in compliance with applicable industry specification.

B. Installation of approved devices shall be made in accordance with the manufacturer's instructions. Maintenance as recommended by the manufacturer of the device shall be performed. The manufacturer's maintenance manual shall be available on site.

8-3-10: INSPECTION, AND MAINTENANCE AND REPORTING:

A. It shall be the duty of the consumer at any premises on which backflow prevention devices required by this chapter are installed to have inspection, tests, maintenance and repair made in accordance with the following schedule or more often where inspections indicate a need or are specified in the manufacturer's instructions:

1. Fixed proper air gap separations shall be inspected to document that a proper vertical distance is maintained between the discharge point of the service line and the flood level rim of the receptacle at the time of installation and at least annually thereafter. Corrections to improper or bypassed air gaps shall be made within twenty four (24) hours.
2. Double check valve assemblies shall be inspected and tested at the time of installation and at least annually thereafter, and required service performed within five (5) days.
3. Reduced pressure principle backflow prevention assemblies shall be tested at the time of installation and at least annually or more frequently if recommended by the manufacturer, and required service performed within five (5) days.

B. Testing shall be performed by a person who has been approved by the Agency as competent to service the device. Proof of approval shall be in writing.

C. Each device shall have a tag attached listing the date of most recent test or visual inspection, name of tester and type and date of repairs.

D. A maintenance log shall be maintained and include:

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1. Date of each test or visual inspection;
2. Name and approval number of person performing the test or visual inspection;
3. Test results;
4. Repairs or servicing required;
5. Repairs and date completed; and
6. Servicing performed and date completed.

E. Whenever backflow prevention devices required by this chapter are found to be defective, they shall be repaired or replaced at the expense of the consumer without delay, as required by subsection A of this section.

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

G. It shall further be the duty of the water consumer to provide a complete record of all inspections and repairs performed under this chapter to the Village's designated Backflow Compliance Manager. Such reporting shall be made by the duly licensed contractor performing the inspection or repair work, but the consumer remains ultimately responsible to ensure that complete and accurate records are provided in a timely fashion. Any fees charged for this service by the Backflow Compliance Manager shall be promptly paid by the water consumer.

8-3-11: BOOSTER PUMPS:

A. 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 cutoff device designed to shut off the booster pump when the pressure in the service line on the suction side of the pump drops to twenty (20) psi or less.

B. It shall be the duty of the water consumer to maintain the low pressure cutoff device in proper working order and to certify to the superintendent of water, at least once a year, that the device is operable.

8-3-12: VIOLATIONS:

A. The superintendent of water shall deny or discontinue, after reasonable notice to the occupants thereof, the water service to any premises wherein any backflow prevention device required by these regulations is not installed, tested, maintained and repaired in a manner acceptable to the superintendent of water, 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 cutoff required by these regulations is not installed and maintained in working order.

B. 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 superintendent of water, and the required reconnection fee is paid.

C. Water service to such premises shall not be restored until the consumer has corrected or eliminated such conditions or defects in conformance with this chapter and to the satisfaction of the superintendent of water utilities/operations.

D. Neither the village, the superintendent of water or its assents or assigns shall be liable to any customers of the village for any injury, damages or lost revenues which may result from termination of said customer's water supply in accordance with the terms of this chapter, whether or not said termination of the water supply was with or without notice.

E. The consumer responsible for back siphoned material or contamination through backflow, if contamination of the potable water supply system occurs through an illegal cross connection or

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an improperly installed, maintained or repaired device, or a device which has been bypassed, must bear the cost of cleanup of the potable water supply system.

8-3-13: PENALTY:

A. Any person found to be violating any provision of this chapter shall be served with written notice stating the notice of the violation and providing a reasonable time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violation.

B. Any person violating any of the provisions of this chapter, in addition to the fine provided, shall become liable to the village for any expense, loss or damage occasioned by the village by reason of such violation, whether the same was caused before or after notice. By way of example and not limitation, any such expenses may include all costs associated with any isolation or shut-off of service, cleanup of contaminated water, disposal of contaminated water, testing of the village water supply and restoration of service.

C. In addition thereto, the Village shall be entitled to injunctive relief as may be appropriate in order to prevent the contamination of the water system, and may institute a cutoff of water service without notice if, in the opinion of the Water Superintendent, a significant hazard exists to the jeopardy of the public health and safety.

D. If the Village files any suit or is involved in any legal action to enforce any provision of this Chapter, the entire cost of the same, including attorney's fees, and all related expenses, shall be awarded to the Village as a part of any judgment or other award entered by any court or jurisdictional tribunal, and the same shall become a charge and lien upon the property of the water consumer sued or claimed against.