ARTICLE XIII: PROTECTION OF PUBLIC WATER SYSTEM

Section

§ 19-149 Definitions.

AIR-GAP SEPARATION. A physical break between a supply pipe and a receiving vessel. The air-gap shall be at least double the diameter of the supply pipe, measured vertically above the top rim of the vessel, in no case less than one inch.

APPROVED DOUBLE CHECK VALVE ASSEMBLY. An assembly of at least two independently acting approved check valves including tightly closing shut-off valves on each side of the check valve assembly and suitable leak detector drains plus connections available for testing the water tightness of each check valve.

APPROVED WATER SUPPLY. Any water supply approved by. or under the public health supervision of, a public health agency of the State of Florida or its political subdivision.

AUXILIARY SUPPLY. Any water supply on or available to the premises other than the public water supply.

CROSS-CONNECTION. Any unprotected connection between any part of a water system used or intended to supply water for drinking purposes and any source or system containing water or substance that is not or cannot be approved as safe, wholesome and potable for human consumption.

DOUBLE DETECTOR CHECK VALVE ASSEMBLY. An assembly of at least two independently acting approved check valves including tightly closing shut-off valves on each side of the check valve assembly, plus properly located test cocks for the testing of each check valve. A bypass arrangement consisting of an approved meter and an approved double check valve shall be incorporated with the device for detection of leaks, and unauthorized use of water.

REDUCED PRESSURE BACKFLOW PREVENTION DEVICE. An approved device incorporating two or more check valves and an automatically operating differential relief valve located between the two checks, two shut-off valves and equipped with necessary appurtenances for testing. The device shall operate to maintain the pressure in the zone between the two check valves, less than the pressure on the public water supply side of the device. At cessation of normal flow the pressure between the check valves shall be less than the supply pressure. In case of leakage of either check valve, the differential relief valve shall open to atmosphere thereby providing an air gap in the device. To be approved these devices must be readily accessible for maintenance and testing and installed in a location where no part of the valve will be submerged.

(Ord. 33-15, 8-31-2015)

§ 19-150 Where protection is required.

(a) Each service connection from a public water system for supplying water to premises having an auxiliary water supply shall be protected against backflow of water from the premises into the public water system, unless the auxiliary water supply is accepted as an additional source by the water purveyor, and is approved by the public health agency having jurisdiction.

(b) Each service connection from a public water system for supplying water to premises on which any substance is handled under pressure in a fashion as to permit entry into the water system shall be protected against backflow of the water from the premises into the public system. This shall include the handling of process

waters and waters originating from the public water supply system which have been subject to deterioration in sanitary quality.

(c) (1) Backflow prevention devices shall be required on the service connection to any premises likely to have internal cross-connections.

(2) It shall be the responsibility of the water user to provide appropriate protective devices as required under § 19-151.

(Ord. 22-93, 6-14-1993)

§ 19-151 Type of protection.

The protective device required shall depend on the degree of hazard which exists or may occur as tabulated below:

(a) At the service connection to any premises where there is auxiliary water supply handled in a separate piping system with no known cross-connection, the public water supply shall be protected by an approved double check valve assembly.

(b) At the service connection to any premise on which a substance that would be objectionable (but not necessarily hazardous to health), if introduced into the public water supply, is handled so as to constitute a cross-connection, the public water supply shall be protected by an approved double check valve assembly.

(c) At the service connection on any premise on which there is an auxiliary water supply where cross-connections are known to exist which cannot be presently eliminated, the public water supply system shall be protected by an approved reduced pressure backflow prevention device. A double check valve assembly may be used in lieu of the device if local experience indicates that double check valves are reliably operated an if approved by the water purveyor and the Florida Department of Environmental Protection.

(d) At the service connection to any premise on which any material dangerous to health or toxic substance in toxic concentration is or may be handled under pressure, the public water supply shall be protected by an air-gap separation. The air-gap shall be located as close as practicable to the service cock and all piping between the service cock and receiving tank shall be entirely visible. If these conditions cannot reasonably be met, the public water supply shall be protected with either an approved reduced pressure backflow prevention device, or an approved double check valve assembly, providing the alternative is acceptable to both the water purveyor and the Florida Department of Environmental Protection.

(e) At the service connection to any sewage treatment plant or sewage pumping station the public water supply shall be protected by an air-gap separation. The air-gap shall be located as close as practicable to the service cock and all piping between the service cock and receiving tank shall be entirely visible. If these conditions cannot be reasonably met, the public water supply shall be protected with an approved reduced pressure backflow protection device, providing this alternative is acceptable to both the water purveyor and the Florida Department of Environmental Protection.

(Ord. 22-93, 6-14-1993; Ord. 58-23 , § 1, 8-16-2023)

§ 19-152 Required inspections; frequency of inspection of protective device.

(a) The City Utilities Director, or City Utilities Director's designee, is granted the authority to inspect any and all water service connections served by the public water supply, and to take appropriate action to ensure the

integrity of the water system. Duly authorized representatives of the City shall be permitted to enter any structure or property served by a connection to the public water supply system of the City to inspect for actual or potential cross-connections or water quality, to test and inspect backflow prevention devices, to conduct health hazard assessments, to inspect reclaimed water or reuse water systems, and to identify hazards that could contaminate the public water supply system. In order to protect the public water supply system, granting reasonable access to the City and its agents to enter private property for such inspections is a condition of receiving City utility service.

(b) It shall be the duty of the commercial or multi-family water user on any premise on account of which backflow protective device are installed to allow the City and its agents to make competent inspections at least once a year, or more often in those instances where successive inspections indicate repeated failure. These devices shall be repaired, overhauled or replaced at the expense of the water user within 30 calendar days from whenever they are found to be defective. Records of the test, repairs and overhaul shall be kept and made available to the water purveyor and the Florida Department of Environmental Protection.

(c) Nothing herein shall relieve the water user of the responsibility for conducting, or causing to be conducted, periodic surveys of water use practices on the premises to determine where there are actual or potential cross-connections in the user's system through which contaminants or pollutants could backflow in the public water supply system.

(Ord. 22-93, 6-14-1993; Ord. 44-11, 8-22-2011; Ord. 58-23 , § 1, 8-16-2023)

§ 19-153 Fire system.

(a) Unless approved by the City of Cape Coral Utilities Director, water systems for fighting fire, derived from a supply that cannot be approved as safe or potable for human consumption or use shall be kept wholly separate from drinking water pipelines and equipment. In no case shall a single domestic water service line be used for both drinking and fire fighting purposes. In no case shall a fire protection system be installed on a reclaimed water main. In all cases, an approved backflow prevention device shall be installed to protect individual drinking water lines. For firefighting purposes, all fire line systems shall have an independent dedicated fire service connection with its own separate approved backflow prevention device and meter assembly. It is hereby declared that it is the responsibility of the person or persons causing the introduction of said unapproved or unsafe water into the pipelines to see:

  (1) That a procedure be developed and carried out to notify and protect users of this piping system during the emergency; and

  (2) That special precautions be taken to disinfect thoroughly and flush out all pipelines which may have become contaminated before they are again used to furnish drinking water. In the event the means of protection of water consumers is by disinfection of the auxiliary fire fighting supply, the installation and its use shall be thoroughly reliable.

(b) When disinfection of the auxiliary supply itself is depended upon to render the water safe, the means of applying the disinfectant under this regulation shall be automatic with operation of the pumps employed with the dangerous water in question. Adequate supplies of chlorine or its compounds must be kept on hand at all times. Chlorine dosing equipment shall be tested daily and kept in good operating condition.

(c) The public water supply must be protected against backflow from the dual domestic fire systems as detailed in § 19-151.

(Ord. 22-93, 6-14-1993; Ord. 33-15, 8-31-2015)

§ 19-154 Process waters.

Potable water pipelines connected to equipment for industrial processes or operations shall be disconnected therefrom if practicable. Where disconnection is not practicable, a suitable backflow prevention device located beyond the last point from which drinking water may be taken shall be provided on the feed line to process piping or equipment. In the event particular process liquid is especially corrosive or apt to prevent reliable action of the backflow prevention device, air-gap separation shall be provided. These devices shall be tested by the City or its agents at least once a year, or more often in those instances where successive inspections indicate repeated failure. The device shall be repaired, overhauled or replaced, at the expense of the water user, whenever they are found to be defective. Records of tests, repairs and replacement shall be kept by the City and shall be available upon request to the Florida Department of Environmental Protection and the potable water user.

(Ord. 22-93, 6-14-1993; Ord. 58-23 , § 1, 8-16-2023)

§ 19-155 Sewage treatment plants and pumping stations.

Sewage pumps shall not have priming connections directly off any drinking water systems. No connections shall exist between the drinking water system and any other piping, equipment or tank in any sewage treatment plant or sewage pumping station.

(Ord. 22-93, 6-14-1993)

§ 19-156 Plumbing connections.

(a) Where the circumstances are such that there is special danger to health by the backflow of sewage, as from sewers, toilets, hospital bedpans and the like, into a drinking water system, a dependable device or devices shall be installed to prevent the backflows.

(b) The purpose of these regulations is to transcend local plumbing regulations but only to deal with those extraordinary situations where sewage may be forced or drawn into the drinking water piping. These regulations do not attempt to eliminate at this time the hazards of back-siphonage through flushometer valves on all toilets but deal with those situations where the likelihood of vacuum conditions in the drinking water system is definite and there is special danger to health. Devices suited to the purpose of avoiding back-siphonage from plumbing fixtures are roof tanks or separate pressure systems separately piped to supply such fixtures, recognized approved vacuum or siphon breakers and other backflow protective devices which have been proved appropriate tests to be dependable for destroying the vacuum.

(c) Inasmuch as many of the serious hazards of this kind are due to water supply piping which is too small, thereby causing vacuum conditions when fixtures are flushing or water is drawn from the system in other ways, it is recommended that water supply piping that is too small be enlarged whenever possible.

(Ord. 22-93, 6-14-1993)

§ 19-157 Pier and dock hydrants.

Backflow protection by a suitable backflow prevention device shall be provided on each drinking water pier head outlet used for supplying vessels at piers of waterfronts. These assemblies must be located where they will prevent the return of any water from the vessel into the drinking water pipeline or into another adjacent vessel. This will prevent such practices as connecting the ship fire pumping or sanitary pumping system with a dock hydrant and thereby pumping contaminated water into the drinking water system and thence to adjacent vessels or back into the public mains.

(Ord. 22-93, 6-14-1993)

§ 19-158 Marking safe and unsafe water lines.

(a) Where the premises contain dual or multiple water systems and piping, the exposed portions of pipelines shall be painted, banded or marked at sufficient intervals to distinguish clearly which water is safe and which is not safe. All outlets from secondary or other potentially contaminated systems shall be posted as being contaminated and unsafe for drinking purposes. All outlets intended for drinking purposes shall be plainly marked to indicate that fact.

(Ord. 22-93, 6-14-1993)

(b) In the event of contamination or pollution of the drinking water system due to cross- connection on the premises, the City of Cape Coral Utilities and the Florida Department of Environmental Protection shall be promptly advised by the person responsible for the water so that appropriate measures may be taken to overcome the contamination

(Ord. 22-93, 6-14-1993; Ord. 49-96, 9-24-1996; Ord. 44-11, 8-22-2011; Ord. 58-23 , § 1, 8-16-2023)

§ 19-159 Penalties for non-compliance.

The City Utilities Director, or the City Utilities Director's designee, shall have the authority to immediately discontinue service to any premise where cross-connections or other hazards to the potable water system are found to exist, and shall not again render service to the premises until the hazards are eliminated in accordance with this article. The City and its agents shall have the authority to hire a licensed plumbing contractor to test, inspect, install, and repair all backflow prevention devices that are regulated by this article. Notwithstanding the foregoing, the water user may elect to hire their own licensed plumbing contractor to make repairs required pursuant to this article. In the event that a property is not brought into compliance by the water user within 30 calendar days of receipt of a notice of non-compliance by the City, the City shall have the authority to make all necessary repairs at the expense of the water user. The City shall have the authority to charge the utility user all costs incurred by the City to bring the property into compliance with the provisions of this article on their next monthly water bill. Any user who violates any of the provisions of this article or alters, bypasses or renders inoperative any backflow prevention device installed under the provisions of this chapter shall be subject to immediate discontinuance of potable water service. Service shall not again be rendered until the violation or non-compliance has been corrected.

(Ord. 22-93, 6-14-1993; Ord. 58-23 , § 1, 8-16-2023)