ORDINANCE NO. 101

AN ORDINANCE AMENDING THE UNIVERSITY HEIGHTS PLUMBING CODE
Be it ordained by the Council of the City of University Heights, Johnson County, Iowa, that the University Heights Plumbing Code is amended as follows:

1. Definitions. The following definitions shall apply only to this ordinance. For the purpose of this ordinance, these definitions supersede definitions given elsewhere in this Code:

   a. Approved backflow prevention assembly for containment. A backflow prevention assembly listed by the University of Southern California Foundation for Cross Connection Control and Hydraulic Research as having met the requirements of ANSI-AWWA Standard C51q-89, Double Check Valve Backflow-Prevention Assemblies or ANSI-AWWA Standard C511-89, Reduced-Pressure Principle Backflow-Prevention Assemblies, all as amended, for containment. The listing shall include the limitations of use based on the degree of hazard. The backflow prevention assembly must also be listed by the International Association of Plumbing and Mechanical Officials.
   b. Approved backflow prevention assembly for containment in a fire protection system. A backflow J prevention assembly to be used in a fire protection system which meets the requirements of Factory Mutual Research Corporation (FI'/1) and Underwriters Laboratory (UL), in addition to the requirements of paragraph 1 (a).
   c. Auxiliary water supply. Any water supply on or available to the premises other than the approved water provider of public water such as, but not limited to, a private well, pond or river.
   d. Containment. A method of backflow prevention which requires the installation of a backflow prevention assembly at the water service entrance.
   e. Cross connection. Any connection or arrangement between a potable water supply system and any plumbing fixture or tank, receptacle, equipment or device, through which it may be possible for nonpotable, used, unclean, polluted and contaminated water or other substance to enter into any part of such potable water system under any condition.
   f. Customer. The owner, operator or occupant of a building or a property or of a private water system which has a water service from a public water system.
   g. Degree of hazard. The rating of a cross connection or

water service which indicates the potential to cause contamination or pollution.

h. Double check valve backflow prevention assembly. A backflow prevention device consisting of two (2) independently acting internally loaded check valves, four (4) properly located test plugs and two (2) isolation valves. (Backflow prevention assembly used for low hazard.)

i. High hazard cross connection. A cross connection which may impair the quality of the potable water by creating an actual hazard to public health through poisoning or through contamination with sewage, industrial fluids or waste.

j. Isolation. A method of backflow prevention in which a backflow prevention assembly is located at the cross connection rather than at the water service entrance.

k. Low hazard cross connection. A cross connection which may impair the quality of potable water to a degree which does not create a hazard to public health but which does adversely and unreasonably affect the aesthetic qualities of such potable water for domestic use.

l. Reduced pressure principle backflow prevention assembly. A backflow prevention device consisting of two (2) independently-acting, internally-loaded check valves, a differential pressure relief valve, four (4) properly located test plugs and two (2) isolation valves. (Backflow prevention assembly used for high hazard.)

m. Registered backflow prevention assembly technician. A person registered with the Iowa State Health Department or its successor agency to test or repair backflow prevention assemblies and to report on the condition of those assemblies.

n. Thermal expansion. Volumetric increase of water due to heating resulting in increased pressure in a closed system.

o. Water service. Depending on the context, water service is the physical connection between a public water system and a customer's building, property or private water system or the act of providing potable water to a customer

2. Administrative authority.

a. For the purposes of this ordinance only, the administrative authority is the City Council acting through such persons or agencies the City Council shall designate.

b. The administrative authority shall have the right to enter any property to inspect for possible cross connection, upon consent of the customer or upon a search warrant issued by a court of appropriate jurisdiction.

c. The administrative authority may collect fees for the administration of this program. Fees shall be established by resolution of the City Council.

d. The administrative authority shall maintain records of

cross connection hazard surveys and of the installation, testing and repair of all backflow prevention assemblies installed in this City.

3. New water services. Plans shall be submitted by the contractor to the administrative authority for review of all new water services to determine the degree of hazard before a permit is issued.

   a. The administrative authority shall determine the type of backflow prevention assembly required for containment based on the degree of hazard.
   b. The administrative authority shall require the installation of the appropriate backflow prevention assembly for containment before the initiation of water service.

4. Existing water services.

   a. Upgrades of existing water services shall be treated as new water services for the purpose of this ordinance.
   b. The administrative authority shall publish and make available to each customer a copy of standards used to determine the degree of hazard.
   c. After publication of the standards, the administrative authority shall give written notice of the provisions of this Section to customers whose premises are classified as single-family residential.
   d. Within two (2) months after notification, customers whose premises are not classified as single-family residential shall complete and return to the administrative authority a cross connection hazard survey to determine the type of devices required.
   e. The administrative authority shall determine the type of backflow prevention assembly required for containment based on the degree of hazard, as determined from information received from customers or gathered through on-premises investigations or surveys.
   f. Within the time frame specified, in writing, by the administrative authority, the customer shall install a backflow prevention assemblies for isolation and containment as required by the administrative authority.
   g. For existing water services, the administrative authority may inspect the premises to determine the degree of hazard. When high hazard cross connections are found, the administrative authority shall, at its sole discretion: 1) develop a schedule of compliance which the customer shall follow or 2) terminate the water service until a backflow prevention assembly for containment required by the administrative authority has been installed.
   h. Failure of the "administrative authority to notify a

customer that said customer is believed to have a high hazard cross connection and that said customer shall install backflow prevention assemblies for containment in no way relieves a customer of the responsibility to comply with all requirements of this Section.

5. Customer.

a. The customer shall be responsible for ensuring that no cross connections exist without approved backflow protection within the customer's premises starting at the point of service from the public potable water system.
b. The customer shall, at the customer's own expense, cause installation, operation, testing and maintenance of the backflow prevention assemblies required by the administrative authority.
c. The customer shall ensure the administrative authority is provided with copies of records of the installation and of all tests and repairs made to the backflow prevention assembly on the approved form within fifteen (15} calendar days after testing and/or repairs are completed.
c. If a backflow incident occurs, the customer shall immediately notify the City of Iowa City Water Division and/or the City of Iowa City Plumbing Inspector and take steps to confine the contamination or pollution.

6. Required backflow prevention assemblies for containment - water services.

a. A water service having one or more cross connections which the administrative, authority classifies as high hazard shall have an approved air gap or an approved reduced pressure principle backflow prevention assembly.
b. Water services having no high hazard cross connections but having one or more cross connections which the administrative authority has classified as low hazard shall have an approved double check valve assembly.

7. Required backflow prevention assemblies for containment-fire protection systems.

a. A reduced pressure principle backflow prevention assembly shall be installed on all new and existing fire protection systems which the administrative authority determines to have any of the following:

1. Direct connections from public water mains with an auxiliary water supply on the premises or available to the premises for pumper connection.
2. Interconnections with auxiliary water supplies,

such as reservoirs, rivers, ponds, wells, mills or other industrial water systems.

3. Antifreezes or other additives in the fire protection system.

4. Combined industrial and fire protection systems supplied solely from the public water mains, with or without gravity storage or pump suction tanks.

5. Any other facility, connection or condition which may cause contamination.

b. All other fire protection systems shall have a double check valve assembly. The double check valve shall be required on all new systems at the time of installation and on existing systems when they are upgraded.

8. Backflow prevention assembly technicians.

a. Any person who tests or repairs backflow prevention assemblies shall be registered by the Iowa State Health Department or its successor agency.

b. A backflow prevention assembly technician registered by the State shall include the technician's registration number on all correspondence and forms required by or associated with this Section.

9. Installation of backflow prevention assemblies.

a. All backflow prevention assemblies shall be installed so that they are accessible for testing."

b. The required backflow prevention assemblies for containment shall be installed in horizontal plumbing immediately following the meter or as close to that location as deemed practical by the administrative authority. In any case, it shall be located upstream from any branch piping. Installation at this point does not eliminate the responsibility of the customer to protect the water supply system from contamination or pollution between the backflow prevention assembly and the water main.

c. Reduced pressure principle backflow prevention assemblies shall be installed so as to be protected from flooding and shall not be installed in underground vaults or pits.

d. All backflow prevention assemblies shall be protected from freezing.

e. Thermal expansion shall be provided for when installing a backflow prevention assembly which uses hot water within the system.

f. Reduced pressure principle backflow prevention assemblies shall be provided with the means to convey the discharge of water to a suitable drain.

g. No backflow prevention assemblies shall be installed above an electrical panel, higher than the ceiling level or in any place where it would create a safety hazard.
h. If interruption of water service during testing and repair of backflow prevention assemblies for containment is unacceptable to the customer, two (2) backflow prevention assemblies, sized to handle the temporary water flow need during the time of test or repair, should be installed in parallel piping.
i. All newly installed shut-off valves shall conform to the requirements for either bailor resilient seat gate valves published in the current edition of the *Manual of Cross-Connection Control* (University of Southern California), as amended. Ball valves shall be used on assemblies installed in piping two inches (2") and smaller, and resilient seat gate valves shall be used on assemblies installed in piping larger than two inches (2.").

10. Testing of backflow prevention assemblies.

a. Backflow prevention assemblies shall be tested by a registered backflow prevention assembly technician, and the costs of tests required by this Section shall be paid by the customer.
b. Backflow prevention assemblies shall be tested upon installation and shall be tested and inspected at least annually thereafter.
c. Backflow prevention assemblies which are in place but which have been out of operation for more than three (3) months shall be tested before operation resumes. Backflow prevention assemblies used in seasonal applications shall be tested before operation resumes each season.
d. Any backflow prevention assembly which fails a periodic test shall be repaired or replaced. When water service has been terminated for noncompliance, the backflow prevention assembly shall be repaired or replaced prior to the resumption of water service. Backflow prevention assemblies shall be retested by a registered backflow prevention assembly technician after repair or replacement.
e. The registered backflow prevention assembly technician shall report the assembly within fifteen (15) calendar days of the test to the customer and to the administrative authority on the form provided by the administrative authority.
f. The administrative authority may require, at its own cost, additional tests of individual backflow prevention assemblies as it shall deem necessary to verify test procedures and results.

11. Repair of backflow prevention assemblies.

a. All repairs to backflow prevention assemblies shall be performed by registered backflow prevention assembly technicians.
b. The registered backflow prevention assembly technician shall not change or modify the design, material or operational characteristics of a backflow prevention assembly during repair or maintenance and shall use only original manufacturer replacement parts.
c. The registered backflow prevention assembly technician shall report the repair of a backflow prevention assembly within fifteen (15) calendar days of the repair to the customer and to the administrative authority on the form provided by the administrative authority. The report shall include the list of materials or replacement parts used and shall summarize the work performed.

12. Customer non compliance. Water service may be discontinued if a customer fails to comply with this ordinance. Non compliance includes, but is not limited to, the following:

a. A customer's refusal to grant access to the property for the purpose of performing inspections required by this Section.
b. Removal of a backf1ow prevention assembly which has been required by the administrative authority.
c. Bypassing a backflow prevention assembly which has been required by the administrative authority.
d. Providing inadequate backf1ow prevention when cross connections exist.
e. Failure to install, test and/or properly repair a backf1ow prevention assembly which has been required by the administrative authority.
f. Failure to comply with the requirements of this Section.
g. Deliberate falsification of documentation concerning the backflow prevention assemblies or possible cross connections.

Passed by the Council this 14th day of November, approved this 14th day of November, 1995.