ORDINANCE NS149

AN ORDINANCE OF THE CITY OF WILLCOX, ARIZONA, AMENDING TITLE 13 OF THE WILLCOX MUNICIPAL CODE, BY ADDING A NEW CHAPTER 13.13, BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROL.

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF WILLCOX, ARIZONA AS FOLLOWS:

Section 1: That Title 13 of the Willcox Municipal Code is hereby amended by adding a new Chapter 13.13 "Backflow Prevention and Cross-Connection Control" to read as follows:

"Chapter 13.13. **Backflow Prevention and Cross-Connection Control.**

Section 13.13.010 Definitions.

(a) Willcox Water as used in this Chapter means the municipal water department for the City of Willcox.

(b) Department as used in this Chapter means the municipal water department for the City of Willcox.

(c) UPC as used in this Chapter means the Uniform Plumbing Code as adopted by Section 15.12.010 of the Willcox Municipal Code.

Section 13.13.020 Purpose.

(a) To protect the public water supply of Willcox Water from the possibility of contamination or pollution from the backflow of contaminants and pollutants into the public potable water supply system.

(b) To promote the elimination or control of existing cross-connections, actual or potential, with a customer's internal potable water system, plumbing fixtures and industrial piping systems.

(c) To provide for a continuing program to monitor, control, and prevent cross-connection contamination or pollution of the public potable water supply system.

Section 13.13.030 Backflow Prevention Required.

(a) An approved backflow prevention method shall be utilized or installed at every service connection when it is determined by Willcox Water that the public potable water system may be subject to contamination, pollution or deterioration of its sanitary quality or condition.

(b) The backflow prevention method to be utilized or installed shall be determined by Willcox Water. The method of backflow prevention which an applicant will be required to use shall be of a nature sufficient to protect the public potable water supply against potential hazards from contamination or pollution.

Section 13.13.040 Hazard Potential.

The degree of hazard potential to the public potable water supply and system from a customer's water supply system shall be determined using the following hazard factors:

(a) Contamination: Any condition, device or practice which, in the judgement of Willcox Water, may create a danger to the health and well-being of the potable water customers.

(b) Cross-connection: An actual or potential plumbing connection that is not properly protected by an approved backflow prevention method.

(c) Hazard: An actual or potential threat of backflow which may cause severe damage to the physical facilities of the public potable water supply system or which may have a protracted effect on the quality of the potable water in the system.

(d) Pollution: An actual or potential threat to the physical facilities or the public potable water supply system or to the public potable water supply which would constitute a nuisance or cause objectionable odor, taste, or discolor or could cause damage to the system or its appurtenances.

Section 13.13.050 Backflow Prevention Methods: List.

(a) A backflow prevention method shall be any assembly or others means designed to prevent backflow. The following are the recognized backflow prevention methods which Willcox Water may require under Section 13.13.030 or 13.13.060.

1. Air Gap: The unobstructed vertical distance through the free atmosphere between the opening of the pipe or faucet supplying potable water to a tank, plumbing fixture or other device. An approved air gap shall be at least double the diameter or the supply pipe or faucet and in no case less than one (1) inch.

2. Reduced Pressure Principle Assembly (hereinafter "RPA": An assembly containing two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves, and at the same time below the first check valve. The assembly shall include properly located test cocks and tightly closing shut-off valves located at each end of the assembly and fitted with properly located test cocks.

3. Double Check Valve Assembly (hereinafter "DCVA"): An assembly composed of two independently acting, approved check valves, including tightly closing shut-off valves located at each end of the assembly and fitted with properly located test cocks.

4. Pressure Vacuum Breaker Assembly (hereinafter "PVB": An assembly containing an independently operating, loaded check valve and an independently operating, loaded air inlet valve

located on the discharge side of the check valve. The assembly shall be equipped with properly located test cocks and tightly closing shut-off valves located at each end of the assembly.

(b) Willcox Water shall maintain a list of approved backflow prevention assemblies, by type and manufacturer. The list shall be available to any customer required to install a backflow prevention assembly.

(c) A backflow prevention method may be approved by Willcox Water if it has received the approval of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California and, for assemblies, has a local manufacturer's parts and service center.

Section 13.13.060 Backflow Prevention Methods Required.

(a) Whenever the following items exist or activities are conducted on premises served by the public potable water system, a potential hazard to the public potable water supply shall be presumed, and a backflow prevention method of the type specified herein for that item or activity must be utilized or installed at each service connection for that premise. The type and size of the assembly shall be determined by Willcox Water. The bases for these requirements are contained in the Willcox Water Manual of Backflow Prevention and Cross-Connection Control Program as is further set forth in section 13.13.180.

(1) Cooling Tower, boiler, condenser, chiller, and other cooling systems utilizing potable water: RPA.

(2) Tank, vessel, receptacle, and all other water connections including mobile units without approved air gap (except emergency vehicles and private swimming pools): RPA

(3) Ice Maker (other than a residential service): RPA

(4) Water cooled equipment, boosters, pumps or autoclaves: RPA

(5) Water treatment facilities and all water processing equipment (other than residential water softeners): RPA

(6) Bottle washer, bedpen washer, garbage can washer: RPA

(7) Pesticide, herbicide, fertilizer, and chemical applicators (other than typical in-home use): RPA

(8) Aspirator: RPA

(9) Commercial Dishwashers, food processing and/or preparation equipment, carbonation equipment, or other food service processes utilizing potable water. RPA

(10) Decorative fountain, baptismal, or any location water is exposed to atmosphere: RPA

(11) X-ray equipment, plating equipment, or any other photographic processing equipment utilizing potable water: RPA

(12) Auxiliary water supply and/or connections to unapproved water supply systems: RPA

(13) Reclaimed Water customers: RPA

(14) Recreational vehicle dump stations (sewer), or any other location where potable water may be exposed to bacteria, virus, or gas: RPA

(15) Any premises on which chemicals, oils, solvents, pesticides, disinfectants, cleaning agents, acids or other pollutants and/or contaminants are handled in a manner by which they may come in direct contact with potable water, or their is evidence of the potential to contact potable water (other than typical, infrequent in-home applications): RPA

(16) Materials and piping systems unapproved by the Uniform Plumbing Code (UPC) or Environmental Protection Agency for potable water usage (for fire systems see the following listings: (20, 21 &22): Contaminant: RPA-Pollutant: DCUA

(17) Separately metered or unprotected irrigation systems, and construction water services: RPA or PVB as allowed.

(18) Any premises where a cross-connection is maintained or where internal backflow protection is required pursuant to the Uniform Plumbing Code: RPA

(19) Multi-metered properties with more than one meter connected to another or any building three stories or greater than 34 feet in height from service level: DCVA

(20) Fire systems - American Water Water Works Association Classes 1 and 2 and all systems constructed of a piping material not approved for potable water pursuant to the Uniform Plumbing Code as adopted by the City of Willcox: DCVA or Double Detector CVA. Furthermore, fire systems, Classes 1 and 2, that are under the jurisdiction of the City of Willcox Department of Public Safety Fire Division or a Fire District that requires periodic sprinkler system testing similar to the City's are exempt from this ordinance: DCVA

(21) Fire systems - American Water Works Association Classes 3, 4, 5, 6: RPA or RPA with Detector

(22) Fire systems which require backflow protection and where backflow protection is required on the industrial/domestic service connection that is located on the same premises, both service connections will have adequate backflow protection for the highest degree of hazard affecting either system: RPA - (Requirement may be waived by Willcox Water.)

(b) When two or more of the activities listed above are conducted on the same premises and served by the same service connection or multiple service connections, the most restrictive backflow prevention method required for any of the activities conducted on the premises shall be required to be utilized or installed at each service connection. The order of most restrictive to least restrictive backflow prevention methods shall be as follows:

(1) Air Gap (most restrictive)

(2) Reduced Pressure Principle Assembly (RPA)

(3) Double Check Valve Assembly (DCVA)

(4) Pressure Vacuum Breaker Assembly (PVB) (least restrictive)

Section 13.13.070 Backflow Assembly Installation Requirements

(a) Backflow prevention assemblies shall be installed by the customer, at the customer's expense and in compliance with the standards and specifications adopted by the City of Willcox, at each service connection. The assembly shall have a diameter at least equal to the diameter of the service connection.

(b) The assembly shall be in an accessible location approved by Willcox Water. The reduced pressure principle assembly, pressure vacuum breaker assembly, and the double check valve assembly shall be installed above ground.

(c) When a customer desires a continuous water supply, two backflow prevention assemblies shall be installed parallel to one another at the service connection to allow a continuous water supply during testing of the backflow prevention assemblies. When backflow prevention assemblies are installed parallel to one another, the sum of the cross sectional areas of the assemblies shall be at least equal to the cross sectional area of the service connection.

(d) No person shall alter, modify, bypass or remove a backflow prevention method without the approval of Willcox Water.

Section 13.13.080 Installation of Backflow Prevention Assemblies for Fire Systems

In addition to the requirements of Section 13.13.060 the following shall also apply.

(a) Fire Systems - Fire protection systems consist of sprinklers, hose connections, and hydrants. Sprinkler systems may be dry or wet, open or closed. Systems of fixed-spray nozzles may be used indoors or outdoors for protection of flammable-liquid and other hazardous processes. It is standard practice, especially in cities, to equip automatic sprinkler systems with fire department pumper connections.

A meter (compound, detector check) should not normally be permitted as part of a backflow prevention assembly. An exception

may be made, however, if the meter and backflow prevention assembly are specifically designed for that purpose.

For cross-connection control, fire protection systems shall be classified on the basis of water source and arrangement of supplies as follows:

1. Class 1 - Direct connections from public water mains only; no pumps, tanks, or reservoirs; no physical connection from other water supplies; no antifreeze or other additives or any kind; all sprinkler drains discharging to atmosphere, dry wells, or other safe outlets.

2. Class 2 - Same as Class 1, except that booster pumps may be installed in the connections from the street mains. Booster pumps do not affect the potability of the system; it is necessary, however, to avoid drafting so much water that pressure in the water main is reduced below 20 psi.

3. Class 3 - Direct connection from public water supply main plus one or more of the following: elevated storage tanks; fire pumps taking suction from aboveground covered reservoirs or tanks; and pressure tanks (all storage facilities are filled or connected to public water only, the water in the tanks to be maintained in a potable condition.

4. Class 4 - Directly supplied from public mains similar to Classes 1 and 2, and with an auxiliary water supply on or available to the premises; or an auxiliary supply may be located within 1,700 feet of the pumper connection. Class 4 systems will normally require backflow protection at the service connection. The type (air gap or reduced pressure) will generally depend on the quality of the auxiliary supply.

5. Class 5 - Directly supplied from public mains, and interconnected with auxiliary supplies, such as: pumps taking suction from reservoirs exposed to contamination, or rivers and ponds; driven wells, mills or other industrial water systems; or where antifreeze or other additives are used. Classes 4 and 5 systems normally would need maximum protections (air gap or reduced pressure) to protect the public potable water system.

6. Class 6 - Combined industrial and fire protection systems supplied from the public water mains only, with or without gravity storage or pump suction tanks. Class 6 system protection would depend on the requirements of both industry and fire protection, and could only be determined by a survey of the premises.

(b) When a backflow prevention assembly is required for a water service connection supplying water only to a fire system, the assembly shall be installed on the service line in compliance with standard specifications adopted by the City of Willcox. (Installation of DCVA's or DDCVA's in a vertical position on the riser may be allowed on fire systems with Willcox Water approval.)

Section 13.13.090 Inspections.

A customer's water system shall be available at all times during business operations for premises inspection by Willcox Water. The inspection shall be conducted to determine whether any cross connection or other hazard potentials exist and to determine compliance with this chapter and modifications, if any, pursuant to Section 13.13.120.

Section 13.13.100 Permit Required.

(a) Installation permits for the installation of all backflow prevention assemblies required by Willcox Water shall be obtained from Willcox Water prior to installation. A separate permit shall be obtained for each required backflow prevention assembly to be installed. A separate permit shall be required for replacement of a backflow prevention assembly which has been previously installed.

(b) Notification - It shall be the duty of the person doing the work authorized by the permit to notify Willcox Water, orally or in writing, that said work is ready for inspection. Such notification shall be given not less than twenty-four (24) hours before the work is to be inspected and shall be given only if there is reason to believe that the work done will meet Uniform Plumbing Code and University of Southern California standards, as are referenced in the backflow prevention manual.

(c) Stop Orders - Whenever any work is being done contrary to the provisions of the UPC or this Code, Willcox Water or an authorized representative may order the work stopped by notice in writing served on any persons engaged in the doing or causing such work to be done, and any such person shall forthwith stop such work until authorized by Willcox Water to proceed with the work.

(d) Suspension or Revocation - Willcox Water or any authorized employee may, in writing, suspend or revoke a permit issued under provisions of this Code, whenever the permit is issued in error or on the basis of incorrect information supplied, or in violation of any ordinance or regulation of any provision of the UPC or this Code.

Section 13.13.110 Test, Maintenance, Records.

(a) The customer shall test and service backflow prevention assemblies at least once a year. If the testing reveals the assembly to be defective or in unsatisfactory operating condition, the customer shall perform any necessary repairs, including replacement or overhaul of the assembly, if necessary, which will return the assembly to satisfactory operating condition.

(b) If Willcox Water or a customer learns or discovers, during the interim period between tests, that an assembly is defective or in unsatisfactory operating condition, the customer shall perform any necessary repairs, including replacement or overhaul of the assembly, if necessary, which will return the assembly to satisfactory operating condition.

(c) The annual testing shall be performed by an individual certified to

conduct such testing by an agency approved by Willcox Water. A list of certified, approved and recognized individuals will be maintained by Willcox Water and will be available upon request to all persons required to install or maintain a backflow prevention assembly. A certification issued to a backflow prevention assembly tester may be revoked or suspended for improper testing, maintenance, reporting or other improper practices.

(d) The customer shall maintain records, on forms approved by Willcox Water, of the results of all tests and all servicing, repairs, overhauls or replacements of the backflow prevention assembly. A copy of the records shall be promptly submitted to Willcox Water after completion of the activity for which the record is made.

(e) Fire systems shall not be out of service for more than 8 consecutive hours due to testing, maintenance, or repairs. The Willcox Department of Public Safety Fire Division shall be notified immediately of any testing, maintenance, or repairs that place a fire system out of service.

Section 13.13.120 Modification of Backflow Prevention Requirements

If Willcox Water determines, after inspection of the customer's system, that a backflow prevention method less restrictive than that required in Section 13.13.060 will provide adequate protection of the public potable water supply from the degree of hazard potential by the customer's water system, the customer may appeal to the Backflow and Cross Connection Hearing Committee for relief as provided in Section 13.13.140.

Section 13.13.130 Discontinuance of Water Service.

(a) If Willcox Water discovers that a customer's required backflow prevention method has been improperly tested or maintained, the water service to that service connection shall be disconnected if the situation is not remedied within the time specified in the notice sent to the customer as required by this section. The service shall not be restored until the condition is remedied.

(b) Water service to a fire sprinkler system shall be subject to disconnection under this section. If a situation, which will result in discontinuance of water service in subsection (a) above, is not remedied within the time provided in the notice sent to the customer, multiple violations will accrue.

(c) Prior to disconnecting any water service because a condition set forth in subsection (a) above exists, Willcox Water shall issue a notice to the customer describing the condition and notifying the customer that the condition must be remedied within fifteen (15) days form the initial inspection date. If there is no immediate action on the part of the customer, a second notice by certified mail shall be sent ten (10) days after the initial inspection date stating that water service will be disconnected within five (5) days of the second notice. If there is still no action, a turn off notice shall be sent to the customer stating that service will be disconnected on a date

certain (approximately two (2) days from the date of the turn off notice) (For retrofit notification procedures, see section 13.13.160.)

(d) Willcox Water may disconnect, without notice, water service to any customer when Willcox Water discovers that a direct, contaminated cross connection exists in the customer's water system or that a backflow prevention method has been bypassed or removed.

Section 13.13.140 Administrative Appeal.

An Administrative appeal may be requested whenever a violation or disputed of any of the requirements of this Chapter is determined, whether during construction or at the plan review stage, and the applicant wishes to appeal the decision of the staff because of code interpretation, unreasonable hardship or other acceptable reasons. The appeal may be made to the Backflow and Cross Connection Hearing Committee as follows:

(1) The applicant shall file a written appeal on the forms provided by the Willcox Director of Public Works and Services.

(2) The appeal will be heard by the Hearing Committee within seven (7) days, at regular specified time.

(3) The Hearing Committee shall consist of the Director of Public Works and Services, the City of Willcox Building Inspector, and the Cross Connection Supervisor. Additional Inspectors or other technical persons may be added for a particular appeal, at the discretion of the Director of Public Works and Services.

(4) Adequate information shall be provided by the applicant in order to fully describe the conditions in question.

(5) The applicant may, but is not required to, personally attend the Hearing Committee meeting.

(6) If an appeal is denied by the Hearing Committee, the applicant shall comply or appeal to the Willcox City Council within ten (10) days of a denial by the Hearing Committee.

Section 13.13.150 Violation a Civil Infraction.

It shall be a civil infraction punishable pursuant to Section 01.04.010 of the Willcox Municipal Code for any person, enterprise, or corporation to violate any of the requirement of this Chapter.

Section 13.13.160 Retroactive Application.

(a) The provisions of this Chapter shall apply to all new water customers or users and all water customers or users existing prior to the enactment date of this Chapter. Notwithstanding the foregoing, for multiple-metered premises presenting only a pollution hazard as defined in Section 13.13.040 existing as of the effective date of this Chapter, only one new or additional backflow prevention assembly shall be required to be installed within eighteen (18) months from the initial inspection notice and thereafter only one additional backflow assembly installation shall be required during any twelve (12) month

period. Noncompliance may result in discontinuance or water service without further notice.

(b) Backflow prevention assemblies installed prior to enactment of this article, and which do not comply with the requirements set forth herein, shall be replaced with assemblies which comply with the standards set forth herein, within eighteen (18) months from initial inspection notice.

(c) The initial backflow assembly installation permit fee required by Section 13.13.170 shall be waived by Willcox Water for retrofit backflow prevention assemblies only.

(d) Meters documented as running backwards or contamination conditions as defined in Section 13.13.040 shall be immediately addressed under the provisions of Section 13.13.130, subparagraph (d).

Section 13.13.170 Fees.

The fee for any permit required pursuant to the terms of this article shall be established by resolution of the city council.

Section 13.13.180 Backflow and Cross Connection Manual Incorporated by Reference.

(a) All information not specifically set forth in this Article (Standard Details, etc.) will be a matter of public record and will be contained in the following document:

CITY OF WILLCOX, ARIZONA WILLCOX WATER MANUAL OF BACKFLOW PREVENTION AND CROSS-CONNECTION CONTROL PROGRAM DATED,_____ OR THE LATEST REVISION THERETO

which is adopted by this reference as part of this chapter and which shall be available to the public during Willcox Water's normal business hours for inspection and purchase. Three (3) copies of said Manual shall be kept on file in the City Clerk's Office.

Section 2: If any section, subsection, sentence, clause, phrase or portion of this ordinance adopted herein is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions thereof.

Section 3: Whereas, it is necessary for the preservation of the peace, health and safety of the City of Willcox that this ordinance become immediately effective, an emergency is hereby declared to exist, and this ordinance shall be effective immediately upon its passage and adoption.

PASSED AND ADOPTED by the Mayor and Council of the City of Willcox, Arizona, this 28th day of DECEMBER, 1993.

Sandra Ousley

MAYOR SANDRA OUSLEY