

"Placerville, a Unique Historical Past Forging into a Golden Future"



City Manager's Report
February 25, 2014 City Council Meeting
Prepared By: Nathan Stong, City Engineer

Item#: 9.1

Subject: Waive the second reading and adopt an Ordinance entitled AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PLACERVILLE ADDING CHAPTER 14, WATER SYSTEM BACKFLOW AND CROSS-CONNECTION CONTROL, TO TITLE 7 OF THE PLACERVILLE CITY CODE.

Discussion:

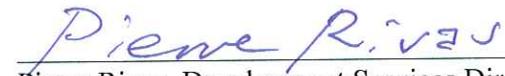
On February 11, 2014, City Council introduced and waived the first reading of an Ordinance adding Chapter 14, Water System Backflow and Cross-Connection Control, to Title 7, Health and Sanitation, of the City Code. The associated Staff Report is included here for reference as Attachment 2.

Cost and Budget Impact: None. The cost of implementing the provisions of this Ordinance at staff level will be absorbed by the existing operating budget.

Recommendation: Waive the second reading and adopt an Ordinance entitled AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PLACERVILLE ADDING CHAPTER 14, WATER SYSTEM BACKFLOW AND CROSS-CONNECTION CONTROL, TO TITLE 7 OF THE PLACERVILLE CITY CODE.



 Nathan Stong, City Engineer



 Pierre Rivas, Development Services Director



 M. Cleve Morris, City Manager

Attachment 1: Ordinance
Attachment 2: February 11, 2014 Staff Report



City Manager's Report
February 11, 2014 City Council Meeting
Prepared By: Nathan Stong, City Engineer

Attachment 2

Item#: 9.1

Subject: Introduce and waive the first reading of an Ordinance entitled AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PLACERVILLE ADDING CHAPTER 14, WATER SYSTEM BACKFLOW AND CROSS-CONNECTION CONTROL, TO TITLE 7 OF THE PLACERVILLE CITY CODE

Discussion:

California Administrative Code, Title 17 (Public Health) mandates that all public water purveyors implement a cross-connection control program for the purpose of protecting the public water supply from pollution and contamination.

The City will meet the requirements of this state code by establishing an Ordinance adding Chapter 14, Water System Backflow and Cross-Connection Control, to Title 7, Health and Sanitation, of the City Code.

The Ordinance (Attachment 1) establishes the policies and procedures for the prevention and elimination of potential and actual threats to the City's water supply, protecting the public health, and enabling the City to meet state and federal law. It clearly identifies the objectives of the program, the responsibilities of both the City and the water customer, and the enforcement measures available to the City in cases of non-compliance.

Options: The City Council may introduce the Ordinance as recommended below, or reject it.

Cost and Budget Impact: None. The cost of implementing the provisions of this Ordinance at staff level will be absorbed by the existing operating budget.

Recommendation: Introduce and waive the first reading of an Ordinance entitled AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PLACERVILLE ADDING CHAPTER 14, WATER SYSTEM BACKFLOW AND CROSS-CONNECTION CONTROL, TO TITLE 7 OF THE PLACERVILLE CITY CODE.

Nathan Stong, City Engineer

Pierre Rivas, Development Services Director

M. Cleve Morris, City Manager

Attachment: Draft Ordinance

ORDINANCE NO. _____

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF PLACERVILLE
ADDING CHAPTER 14, WATER SYSTEM BACKFLOW AND CROSS-
CONNECTION CONTROL, TO TITLE 7 OF THE PLACERVILLE CITY CODE**

The City Council of the City of Placerville does ordain as follows:

Section 1: Title 7, Chapter 14, shall be added to Title 7 of the Placerville City Code and shall read as follows:

“CHAPTER 14

WATER SYSTEM BACKFLOW AND CROSS-CONNECTION CONTROL

- 7-14-1: PURPOSE
- 7-14-2: AUTHORITY
- 7-14-3: DEFINITIONS
- 7-14-4: RESPONSIBILITIES
- 7-14-5: CROSS-CONNECTION CONTROL PROGRAM
- 7-14-6: BACKFLOW PREVENTION ASSEMBLIES REQUIRED
- 7-14-7: MINIMUM CROSS-CONNECTION PROTECTION REQUIREMENTS
- 7-14-8: BACKFLOW PREVENTION ASSEMBLY INSTALLATION, INSPECTION, TESTING AND REPAIR
- 7-14-9: TEMPORARY METER CONNECTION
- 7-14-10: TEMPORARY CONSTRUCTION CONNECTION
- 7-14-11: VIOLATION DECLARED A NUISANCE
- 7-14-12: ENFORCEMENT
- 7-14-13: PENALTIES
- 7-14-14: REMEDIES CUMULATIVE
- 7-14-15: CHAPTER SEVERABLE

7-14-1: **PURPOSE:** In order to protect the public water system, the City is implementing a Cross-Connection Control and Prevention of Backflow Program (Program).

The objectives of the Program are to:

- (A) Protect the public water system at the service connection against any actual or potential cross-connection between the public water system and any source or system containing any substance that is not, or cannot be, approved as safe, wholesome and potable for human consumption;
- (B) Promote the elimination or control of existing cross-connections, actual or potential, between a Customer's potable water system and that Customer's non-potable water system, plumbing fixtures and/or industrial piping systems;
- (C) Outline City and Customer responsibilities for protection of the public water system;
- (D) Outline criteria determining when backflow protection is required;
- (E) Specify requirements for backflow prevention assemblies to protect the water system;
- (F) Provide for the maintenance of a continuing program of cross-connection control which will systematically and effectively prevent the contamination or pollution of all potable water systems; and
- (G) Comply with federal, state, and local laws and policies and to allow the City to meet applicable regulatory requirements and standards.

7-14-2: **AUTHORITY:** These regulations are adopted pursuant to the State of California Administrative Code, Title 17, Section 7583 et seq.

7-14-3: **DEFINITIONS:** When used in this chapter, the following words shall have the meanings herein ascribed to them:

AIR-GAP SEPARATION: A physical vertical separation between the free-flowing discharge end of a potable water supply pipeline and an open or non-pressurized 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 BACKFLOW PREVENTION ASSEMBLY OR ABPA:
Any assembly that is currently included on the El Dorado Irrigation District Approved Backflow Prevention Assemblies list and that has passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated their competency to perform such tests to the California Department of Public Health.

AWWA STANDARD: An official standard developed and approved by the American Water Works Association (AWWA).

BACKFLOW: A flow condition, caused by a differential in pressure that causes the flow of water or other liquids, gases, mixtures or substances into the distributing pipes of a potable supply of water from any source or sources other than an approved water supply source.

CITY: The City of Placerville.

CITY BACKFLOW PREVENTION ASSEMBLY TESTER:
A Backflow Prevention Assembly General Tester with current AWWA certification or City-approved organization with equivalent certification requirements.

CONTAMINANT: A degradation of the quality of the potable water by any foreign substance which creates a hazard to the public health or which may impair the usefulness or quality of the water.

CROSS-CONNECTION: Any unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome, and potable. Bypass arrangements, jumper connections, removable sections, swivel or changeover assemblies, or other assemblies through which backflow could occur, shall be considered to be cross-connections.

CROSS-CONNECTION CONTROL SPECIALIST:
A Cross-Connection Control Program Specialist with current AWWA certification or City-approved organization with equivalent certification requirements.

CUSTOMER: The person(s) or entity whose water service is served from the public water system and in whose name the utility water account is registered.

DEACTIVATED WELL: Any well in which all pumping components, including but not limited to pump, piping, and power supply (if equipped) shall be removed from the well casing. Additionally, the top of the well or well casing shall be provided with a cover that is secured by a lock or by other means to prevent its removal without the use of equipment or tools.

DIRECTOR: The Community Services Director of the City of Placerville.

DOUBLE CHECK VALVE ASSEMBLY (DC):

An assembly composed of two single, independently acting check valves, two tightly closing shutoff valves located at each end of the assembly, and four test cocks for the testing of the check valves.

MANUAL OF CROSS-CONNECTION CONTROL:

The most current edition of the Manual of Cross-Connection Control as published by the University of Southern California's Foundation for Cross-Connection Control and Hydraulic Research.

PREMISES:

Any and all areas on a Customer's property which are served or have the potential to be served by the public water system.

POINT OF SERVICE CONNECTION:

The point of connection of a Customer's piping to the water supplier's facilities.

POLLUTION:

An impairment of the quality of the water to a degree which does not create a hazard to the public health, but which does adversely and unreasonably affect the aesthetic qualities of such waters for domestic use.

RECYCLED WATER:

Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY (RP):

A backflow preventer incorporating not less than two check valves, an automatically operated differential relief valve located between the two check valves, a tightly closing shut-off valve on each side of the check valve assembly, and equipped with necessary test cocks for testing.

REDUCED PRESSURE PRINCIPLE DETECTOR ASSEMBLY (RPDA):

A specially designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a bypass containing a specific water meter and an approved reduced pressure principle assembly. This assembly shall be used to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant). The RPDA is primarily used on fire sprinkler systems.

UNAPPROVED AUXILIARY WATER SUPPLY:

Any water supply on or available to the premises other than the approved water supply. An Unapproved Auxiliary Water Supply

includes, but is not limited to, a well, spring, pond, storage tank or any other water source that is piped or captured in any fashion that would facilitate its use as an Unapproved Auxiliary Water Supply on the premises. An Unapproved Auxiliary Water Supply does not include a decorative or natural water feature that serves solely for aesthetic and/or recreational purposes and lacks piping and/or equipment that would facilitate its use as an Unapproved Auxiliary Water Supply on the premises.

7-14-4: **RESPONSIBILITIES:** Responsibilities for protection of the public water system are shared by the City and the Customer.

- (A) City Responsibilities: The City, and its duly authorized employees, shall operate the public water system and implement a cross-connection control program. The purpose of this chapter is to: (1) protect the City water system against actual or potential cross-connections by isolating within the premises contamination that may occur because of some undiscovered or unauthorized cross-connection on the premises; (2) eliminate existing connections between potable water systems and non-potable systems that create a hazard to public health; (3) eliminate existing cross-connections between potable water systems and sources of contamination; and (4) prevent the making of cross-connections in the future. Except as otherwise provided, City staff shall administer, implement, and enforce the provisions of this Program. Any powers granted to or duties imposed upon the Director may be delegated to a duly authorized employee or the Director's designated agent.

- (B) Customer Responsibilities: All Customers of the City are subject to the conditions of this Program, as set forth herein, as well as California Code of Regulations (CCR) Title 17, Section 7584, which requires the City to comply with Public Law 99-339 - 1986 Amendments of the Safe Drinking Water Act of 1974, as they are now constituted, or as they may hereafter be amended or re-codified. The Customer will have the prime responsibility of preventing contaminants and/or pollutants from their water systems entering the public water system.

7-14-5: **CROSS-CONNECTION CONTROL PROGRAM:**

- (A) Compliance Enforcement: If it is determined that a backflow prevention assembly is required, the installation of such an assembly shall be a condition of continued water service. The Customer shall be notified in writing and given no more than 60 calendar days from the date of the initial notice to comply. If a Customer fails to comply, then the City shall proceed with enforcement up to and including termination of water service to the premises being served. In the event the City determines a Customer's water system poses an immediate health risk to the public water supply, the City reserves the right to

immediately terminate water service without prior notification and must do so to comply with Title 17 of the CCR.

- (B) Cross-Connection Control Surveys: A Cross-Connection Control Survey (Survey) shall be performed by City or contractor staff certified as an AWWA Cross-Connection Control Program Specialist (Specialist). The City shall conduct Surveys of existing unprotected premises and premises suspected to have existing inadequate backflow protection. If an actual or potential hazard is determined to exist, a backflow prevention assembly shall be installed by the Customer in accordance with current City specifications upon notification. All expenses of the installation shall be the Customer's responsibility. Existing premises not required to install backflow prevention assemblies as a result of a City Survey shall be subject to subsequent regular City Surveys for the purpose of confirming continued compliance pursuant to this Program.
- (C) Backflow Prevention Assembly Inspection, Testing and Repair: During installation and prior to covering trenches, the City shall visually inspect the connection and entire length of pipeline from the meter or service connection to the downstream side of the Approved Backflow Prevention Assembly (ABPA) before City acceptance. In accordance with and subject to the provisions of Section 7-14-8(D), backflow prevention assemblies require initial testing by the Customer and annual testing thereafter, the cost of which will be borne by the Customer and which, subject to Section 7-14-8(D), shall be performed by the City. City may elect, in its sole discretion, to assign any or all annual testing responsibilities to a duly authorized representative. The City will attempt to flush, clean, and retest an assembly that does not pass annual testing. If the assembly fails the test, then the Customer will be notified of the requirement to repair or replace the assembly. The City's current fee for performance of initial inspection and annual testing shall be set by resolution of the City Council and set forth in the City's Master Fee Schedule.

Any repair or replacement of any assembly components, including, but not limited to, assembly housing, shut-off valve, or relief valve housing shall be performed by the Customer and subject to inspection by the City. Any replacement of irreparable assembly or installation of a new ABPA, including initial testing of repaired or replaced assembly, shall be performed by the Customer and subject to inspection by the City. The City shall not be responsible for any loss or damage directly or indirectly resulting from or caused by any improper or negligent installation, operation, use, repair or maintenance of, or interference with, any backflow prevention assembly required by this Program, by any Customer or any other person.

7-14-6: **BACKFLOW PREVENTION ASSEMBLIES REQUIRED:**

- (A) No water service connection to any premises shall be installed or maintained by the City unless the water supply is protected as required by this Code, Sections 7583 through 7605 of the California Code of Administrative Regulations, and other applicable state laws and regulations. The City shall discontinue service of water to any premises in the following

situations: (1) if a backflow prevention assembly required by this Code is not installed; (2) if a backflow prevention assembly has been removed or bypassed; or (3) if an unprotected cross-connection exists on the premises. Service will not be restored until such condition or defects are corrected.

- (B) In the case of premises having an auxiliary water supply that is not or may not be of safe bacteriological or chemical quality and that is not acceptable to the Director as an additional source, the property owner shall protect the public water system against backflow from the premises by installing an approved backflow prevention assembly in the service line.
- (C) In the case of a premises having: (1) internal cross-connections that cannot be permanently corrected or controlled; (2) intricate plumbing and piping arrangements where entry to all portions of the premises is not readily accessible for inspection purposes; or (3) a condition that in the opinion of the Director constitutes a hazard to health, the property owner shall protect the public water system against backflow from the premises by installing an approved backflow prevention assembly in the service line.
- (D) The type of protection that shall be provided to prevent backflow into the approved water supply shall be commensurate with the degree of hazard that exists on the premises. The types of protective assembly that may be required (listed in an increasing level of protection) include:
 - 1. Double check assembly (DC);
 - 2. Reduced Pressure Principle Backflow Prevention Assembly (RP); and
 - 3. Air-gap separation (AG).

The Customer may choose a higher level of protection than required by the City. Situations shall be evaluated on a case by case basis and the appropriate backflow protection shall be determined by the City.

7-14-7: MINIMUM CROSS-CONNECTION PROTECTION REQUIREMENTS:

- (A) Minimum protection levels shall be determined by the City. The following list of circumstances shall require backflow prevention and is not exclusive:
 - 1. All new non-residential connections;
 - 2. Premises determined by the City to have unusually complex plumbing configurations that cannot be adequately evaluated;

3. Premises with limited access or that deny access to the City for internal inspections;
 4. Existing non-residential connections where City water facilities and connections are modified, upgraded or improved;
 5. Each service connection that supplies water to premises on which any substance is or may be handled in such a manner as to permit entry into the public water system, including water originating from the public water system which is or may be subjected to deterioration in sanitary quality;
 6. Parcels having more than one service connection;
 7. Premises where there are irrigation systems into which fertilizers, herbicides, or pesticides are, or can be injected;
 8. Premises where a cross-connection exists, or the potential for one that could result in the pollution or contamination of the public water system;
 9. Residential parcels used for business purposes determined by the City to pose a threat to the public water system;
 10. Premises with any Unapproved Auxiliary Water Supply, whether or not it is interconnected with the public water system, except those premises with a Deactivated Well;
 11. Premises with internal pressure boosting system; and
 12. All sewage/wastewater treatment facilities and sewage lift stations.
- (B) Nothing in this Program shall be construed as affecting the Customer's responsibility for meeting the local fire district's fire system flow requirements. Nothing in a local fire district's fire flow system requirements shall be construed as affecting the Customer's responsibility for meeting the requirements of this Program.
- (C) Existing Non-Residential Service Connections: Existing unprotected non-residential connections are subject to City evaluation and onsite cross-connection control surveys. The City must be provided unimpeded access to perform internal inspections for the purpose of determining cross-connection hazards. If City access is impeded for any reason, then the Customer will be required to install a minimum of an RP to protect the public water system.

- (D) New Non-Residential Fire Suppression System Connections: All new non-residential fire suppression system connections shall be protected with a City approved RPDA installed according to City specifications.
- (E) Existing Non-Residential Fire Suppression System Connections: Non-residential fire suppression systems currently protected with a minimum of a single detector check valve will be allowed to continue in service until such system is modified, updated, improved, or hazard classification is determined to require an RPDA. If existing protection is determined inadequate or is modified, improved, or updated as identified under this Program, the Customer shall install an RPDA at the point of connection to City water system according to City specifications.

7-14-8: **BACKFLOW PREVENTION ASSEMBLY INSTALLATION, INSPECTION, TESTING AND REPAIR:**

- (A) The Customer shall own and bear all cost for the installation, initial testing, repairs and re-testing of all ABPAs required in accordance with this Program. Upon notification by the City, the Customer shall repair or replace existing assemblies determined to be unapproved, defective, damaged or not providing the level of protection specified by this Program. All installations shall comply with the California Plumbing Code and the City's current Design and Construction Standards. The Customer shall contact the City to request necessary inspections prior to covering pipe and/or connections associated with the installation.
- (B) The Customer shall bear all costs that the Customer determines are necessary in their sole discretion, for the installation of pumps or renovation of existing Customer piping, as a result of any decreases in line pressure or flow attributed to upgrading or installing an ABPA.
- (C) The Customer shall provide the City and its agents with unimpeded access to backflow prevention assemblies for routine testing and repairs. The City recognizes the potential of freeze damage to ABPAs and associated above-ground piping. Commercially available insulated "soft" covers are authorized to be installed by the Customer for the purpose of freeze protection if such cover provides access for required testing and maintenance. The Customer shall not, without City's prior written authorization, install any enclosure or any other apparatus for the purposes of freeze protection or theft deterrent that impedes access to the assembly. Upon determination by City staff, enclosures posing a safety hazard or impeding access shall be upgraded or removed by the Customer to assure the safety of City staff and completion of testing.
- (D) It shall be the duty of the City at any premises where backflow prevention assemblies are installed to have certified inspections and operational tests made at least once a year. In those instances where the Director or his designated agent deems the hazard to be great enough, he may require certified inspections at more frequent intervals. These inspections

and tests shall be at the expense of the Customer and shall be performed by City personnel or the City's designated agent. The cost of the inspection and testing shall be paid by the Customer and shall be invoiced to the Customer by the City. The cost shall be the amount set by resolution of the City Council and set forth in the City's Master Fee Schedule. Prior to testing, the City or its designated agent shall contact the Customer as to the scheduled testing date. The Customer may elect to have the inspection and testing performed by a qualified, certified tester, acceptable to the City, by so notifying the City in writing prior to the scheduled testing date. The Customer shall be responsible for all costs associated with such annual testing and shall cause the City to be provided with the test report within ten (10) days after the scheduled testing date. If the Customer has not submitted the test report by this date, the City will test the backflow prevention assembly and the Customer will be charged as set forth hereinabove. In the event that the backflow prevention assembly fails to pass the test, the Customer shall be notified and within thirty days of the date of notification, either repair or replace and test the assembly as provided in this chapter or water service will be discontinued.

7-14-9 TEMPORARY METER CONNECTION:

Temporary meter connections to City hydrants, blow-offs, or other City infrastructure shall be protected with a minimum of an RP. The temporary meter and RP shall be installed by the City upon Customer submittal of appropriate request form and accompanying deposit to the City. The location of the installed temporary meter connection shall be determined by the City in its sole discretion following review of request form. Customer shall access water at approved location through City-installed gate valve located downstream of RP. Under no circumstances shall Customer operate hydrant, blow-off, or other City infrastructure.

7-14-10 TEMPORARY CONSTRUCTION CONNECTIONS:

Temporary construction connections to City water mains used for the purpose of testing and flushing non City water lines shall be protected with a minimum of an RP. The shall be installed in accordance with El Dorado Irrigation District's current Design and Construction Standards and shall be inspected and certified by the City Utility Services Technician prior to use and annually thereafter until completion of project. Failure to contact City in a timely manner for annual certification may result in termination of connection to City water main. Each RP must also be retested by the City upon relocation.

7-14-11: VIOLATION DECLARED A NUISANCE:

Any activity in violation of this chapter that will adversely and seriously affect the public health, safety and welfare, is hereby declared to be a public nuisance and may be remedied as provided in this chapter, any other applicable portion of the Placerville Municipal Code or applicable state law.

7-14-12: **ENFORCEMENT:**

- (A) This chapter shall be enforced pursuant to the provisions of Placerville Municipal Code Sections 1-4-1 to 1-4-10, inclusive, any other enforcement mechanism available to the City under the Placerville Municipal Code and/or applicable law.
- (B) Unless otherwise expressly provided in this chapter, the Director shall enforce the provisions of this chapter.

7-14-13 **PENALTIES:**

- (A) The goal of the provisions of this chapter is to achieve voluntary compliance from the customer, and the City will take reasonable measures to assure the Customer has information available to promptly and efficiently address cross-connection issues. Where voluntary compliance cannot be achieved through initial contacts and warnings, then appropriate administrative penalties and further action are required.
- (B) Penalties:
 - 1. A violation of this chapter shall also be an administrative violation as defined in Chapter 4A of the Placerville Municipal Code.
 - 2. Based on the criteria for imposition of administrative sanctions set forth in Chapter 4A of Title I, each day a violation of this chapter continues shall be deemed a Level A violation as that term is described in Section 1-4A-3 with an initial penalty of up to one hundred dollars.
 - 3. Violations of this chapter that are deemed to be wilful noncompliance may be subject to Level B violation as determined by the Director.
- (C) Appeal: There shall be no appeal of the level of protection required in Section 7-14-6 and 7-14-7 and any appeal of administrative penalties shall follow the request for hearing procedures provided for in Chapter 4A of Title I. Any order to discontinue water service or any other orders or decisions of the Director shall be appealable to the City Manager, provided, however, that the City Manager's decision shall be final and there shall be no appeal to the City Council.

7-14-14: **REMEDIES CUMULATIVE:**

The remedies set forth in this chapter are cumulative to any other remedy available to the City. Pursuit of one remedy shall not preclude any other remedy, and nothing contained in this chapter shall limit or be deemed to prevent the City from pursuing any other remedy available to the City under the Placerville Municipal Code or any other applicable law.

7-14-15: **CHAPTER IS SEVERABLE:**

If any provision of this chapter or application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions of this chapter that can be given effect without the invalid provision or its application, and to this end the provisions of this chapter are severable.”

The above Ordinance was introduced at a regular meeting of the City Council of the City of Placerville on _____, by Councilmember _____, and the reading of said Ordinance was waived. The Ordinance was read for a second time on _____. Councilmember _____ moved for adoption of the Ordinance, and a poll vote was taken which stood as follows:

AYES:
NOES:
ABSENT:
ABSTAIN:

Carl Hagen, Mayor

Attest:

Susan Zito, City Clerk, MMC